DOCUMENT RESUME

ED 283 631 RC 016 193

AUTHOR	Russell, A. Yvonne, Ed.; Lusero, Gilberto T., Ed.
TITLE	Conference on Health Problems of the US-Mexico Border: Gaps in Service and How to Fill Them Proceedings (El Paso, Texas, February 27-March 1, 1985).
INSTITUTION	Pan American Health Organization, El Paso, TX. Field Office.; Texas Univ., Galveston. Medical Branch.
SPONS AGENCY	Carnegie Corp. of New York, N.Y.
PUB DATE	85
NOTE	59p.
AVAILABLE FROM	Office of the Dean of Medicine, Suite 528 Administration Building, The University of Texas Medical Branch, 301 University Boulevard, Galveston, TX 77550 ($1.50 postage and handling fee).
PUB TYPE	Collected Works - Conference Proceedings (021) -- Viewpoints (120)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Agency Role; Biculturalism; Death; Diseases; *Family Health; Family Planning; *Health Needs; *Health Programs; Intercultural Programs; *International Programs; Migrants; Needs Assessment; Obstetrics; Pediatrics; *Philanthropic Foundations; Preventive Medicine; Primary Health Care; Program Effectiveness
IDENTIFIERS	Carnegie Foundation; *Health Promotion; Kellogg Foundation; *Mexico United States Border

ABSTRACT

Papers presented, workshop discussions, and conference recommendations are collected in this report of a conference intended to review health needs along the United States-Mexico border and focus on what assistance might practically and realistically be given by the Carnegie Corporation and other private and public funders. Topics of discussion are border health, health promotion and disease prevention, maternal and child health, family planning, and primary care. The texts of the speeches by a speaker from the United States and a speaker from Mexico address each topic. Two papers discuss the role of the W. K. Kellogg Foundation in assisting Latin America and the role of the Pan American Health Organization. The summary of workshop discussions includes specific recommendations for cooperative efforts and agreements and identifies programs which have proven effective and should be augmented, continued, restored, or replicated at other sites. Further recommendations are made for implementing programs in health education, environmental and occupational health, health insurance, maternal and child health, and family planning. The report includes a bibliography of 112 references and a directory of conference attendees. (JHZ)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED283631

PROCEEDINGS

CONFERENCE ON HEALTH PROBLEMS OF THE US-MEXICO BORDER: GAPS IN SERVICE AND HOW TO FILL THEM

Edited by

A. Yvonne Russell, M.D., Ph.D.
Gilberto T. Lusero, Ph.D.
University of Texas Medical Branch, Galveston, TX
1985

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Gilberto T. Lusero
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

RC016193

BEST COPY AVAILABLE

PROCEEDINGS

CONFERENCE ON HEALTH PROBLEMS OF THE US-MEXICO BORDER: GAPS IN SERVICE AND HOW TO FILL THEM

El Paso, Texas February 27-March 1, 1985

Edited by

A. Yvonne Russell, M.D., Ph.D.
Gilberto T. Lusero, Ph.D.

Sponsored by

University of Texas Medical Branch, Galveston, TX
Pan American Health Organization Field Office, El Paso, TX
Carnegie Corporation of New York

Supported by a grant from Carnegie Corporation of New York

Re: Additional Copies

To: Office of the Dean of Medicine
Suite 528 Administration Building
The University of Texas Medical Branch
301 University Boulevard
Galveston, Texas 77550

Send To:

_____

_____

_____

_____

Postage and Handling Fee: $1.50

i

TABLE OF CONTENTS

Opening Comments

Dr. William C. Levin — Page 2
Dr. Lawrence M. Nickey — 3
Dr. Elena O. Nightingale — 3

Border Health:

The Perspective from the US
Mr. John Kelso — 5
The Perspective from Mexico
Dr. Jose Laguna — 6

Health Promotion and Disease Prevention

Dr. Edward N. Brandt, Jr. — 9
Dr. Dionisio Aceves Sainos — 12

Maternal and Child Health and Family Planning

Dr. Manuel Urbina Fuentes — 14
Dr. David Warner — 16

Primary Care

Dr. Andrew W. Nichols — 19
Dr. Amador Flores Arechiga — 23

The Role of the Foundation

Dr. Robert Sparks — 25

The Role of the Pan American Health Organization

Dr. George Alleyne — 24

Workshop Discussions & Conference Recommendations — 26

Closing Comments

Dr. Elena Nightingale — 36

Source Documents — 38

Attendees — 47

OPENING COMMENTS

Dr. William C. Levin
President
University of Texas Medical Branch
Galveston, Texas

It is with pleasure that I welcome you to El Paso del Norte to participate in this essential conference, an admirable effort. I thank each of you personally for giving of your precious time to be here. I thank Drs. A. Yvonne Russell, Gilberto T. Lusero and other members of our staff, the Pan American Health Organization, Dr. Herbert Ortega and his staff, for co-sponsoring and helping coordinate this conference. I thank the governments of Mexico, and the United States, the six Mexican states, the four US states and all the departments and institutions for making your presence possible. I especially thank the Carnegie Corporation of New York, its President, Dr. David Hamburg, who could not be here, and the Carnegie staff that are here: Dr. Elena Nightingale, Mr. David Devlin-Foltz and Ms. Jill Sheffield.

Our destinies are linked. In so many ways we are the same people. We share the past, we share the present -and without a doubt we shall share the future that we together create. John Naisbett in his book Megatrends emphasizes that reality succinctly:

> "By the Turn of the Century, we must all be
> tri-lingual: Spanish, English and Computer".

As the President of the University of Texas Medical Branch, one of the largest Health Science Centers in the United States, and the one mandated by the Texas Constitution to serve as the referral hospital for our entire state, I want to "Ofrecerle La Mano y Darle un Abrazo" and I look forward to increased cooperation and coordination between our nations to address the many health needs that are common to both our peoples - our mothers, fathers and especially our children who are truly our future, and whose well being (Bienestar) will come from mutual efforts such as this conference, or it may not come at all.

We who live and serve at the US-Mexico Border are keenly aware of the prevalence of disease and health disorders among the population, as well as their effects upon the economy in general and on the fiscal integrity of individuals and families.

For those of us from the University of Texas Medical Branch and many other educational institutions and health facilities on the border, this meeting holds the promise of a "new" beginning. I say, "new" because we face new realities.

In the 1970's we were involved in a consortium of university and health science centers in Texas linked with community colleges, technical institutes and hospitals along the Texas border. Together these institutions provided academic training and clinical experiences for health workers. In the course

We wish to acknowledge the technical assistance of research Assistant Robert Jono, Department of Preventive Medicine and Community Health and Ms. Olympia Piccardo, Hispanic Program Coordinator.

of the border programs, more than 3,700 persons, recruited from within the border region, were trained as health professionals to deal with the specialized needs of the border populations. Continuing education programs to upgrade skills for physicians, nurses, and allied health personnel involved over 18,000 participants.

These programs resulted in a 35% increase in the number of health professionals working along the South Texas border. We know that 85% of the graduates continued working in the area and in the discipline for which they were trained. We continue to maintain our strong links with border institutions and to participate in the highly successful program for the training of community health workers conducted by the Laredo Webb County Health Department in Laredo with support from the W. K. Kellogg Foundation.

So we know, first hand, that cooperative actions in this area yield positive results and that there are many institutions and individuals able and willing to contribute.

We face an enormous challenge and we are grateful to the Carnegie Corporation for giving us this opportunity to address it.

Dr. Lawrence M. Nickey
Health Officer
County of El Paso, Texas

On behalf of the Mayor of the City of El Paso I would like to say welcome. I also welcome you on behalf of the Texas Board of Health and the Director, Dr. Robert Bernstein, who is ill and cannot join us. We are unique in El Paso inasmuch as we are the meeting point for three states, Chihuahua, Texas and New Mexico and two countries, the US and Mexico. El Paso is the 28th largest city in the US and Juarez, our sister city, is the fourth largest city in Mexico. The growth rate over the last decade in Juarez was 134% and that of El Paso 32%. The populations of the 1980 census were 425,000 in El Paso, which now has a population in excess of 500,000 and Juarez had a population of 900,000, now estimated at 1,200,000. The projected increase in population for the city of El Paso in the year 2000 is 700,000 and for Juarez 1,600,000. The combined metropolitan population of El Paso and Juarez in the 1980 census was larger than metropolitan Fort Worth or the entire state of New Mexico. If one took away the State of Maine, the entire area of the New England states could be dropped into the El Paso area. There were 182 million crossings between the United States and Mexico, of which between El Paso and Juarez there were 36 million crossings, making El Paso - Juarez the largest port of entry in the entire world, in FY 82, the last year that we have valid statistics. We share many problems, including health problems that are not influenced by an imaginary line called the Border.

Dr. Elena O. Nightingale
Special Advisor to the President
Carnegie Corporation of New York

I am honored to welcome you on behalf of the Carnegie Corporation of New York. For those of you who are not familiar with it, the Corporation is a philanthropic foundation created by Andrew Carnegie in 1914 "for the advancement of knowledge and understanding." We trust that this conference will accomplish just that. The President of the Carnegie Corporation, Dr. David Hamburg, had

planned to be with us for this meeting and to offer his welcome in person; instead, he has been called to Moscow for a meeting of US and Soviet Scholars. Dr. Hamburg is with us in spirit. He wanted me to convey to you his gratitude for your willingness to convene here today to discuss the health needs of the people on both sides of the US Mexico Border, how these needs might be better met and how the Carnegie Corporation might help in this endeavor.

The idea for this conference first emerged in November of 1983 at a meeting with Dr. Robert Sparks, President of the W.K. Kellogg Foundation who is here today and who will work with us. The Kellogg Foundation has a distinguished tradition in working for health and education in Latin America. At that meeting, Kellogg shared with Carnegie the program of the Kellogg Foundation in Latin America. Many issues of mutual interest emerged, particularly interest in behavioral change and its relationship to health practices and the role of health promotion and health education activities in these matters. We also discussed maternal and child health, nutrition, family planning and strengthening basic education, some of which will be discussed here, and all of which contribute to human resource development. We spoke to Kellogg of Carnegie's long standing interest in minority populations of the United States and our current interest in strengthening what we might do for the border in areas of health, basic education and civil rights. Kellogg was encouraging about focusing on the US Mexico Border as the first step to increase our activities with Mexican Americans and, through that point of entry, our relationships with Mexico and the Mexican people.

In March of 1984 the Carnegie Corporation and the US Department of Health and Human Services supported a workshop at the Institute of Medicine in Washington, D.C. on the roles of US Institutions of Higher Education in community health care. The workshop was convened to share relevant experiences of some universities in the United States to the global efforts to obtain "Health for All" by the year 2000. The workshop was part of the preparation for the participation of the United States in the Technical Discussions of the World Health Assembly last May, the latter discussions chaired by David Hamburg. Several of the people here today participated in the Institute of Medicine workshop, among them Drs. Jose Laguna, Edward N. Brandt, Jr., A. Yvonne Russell, and Andrew W. Nichols. While listening to the remarks of Dr. Laguna at the Institute of Medicine we became particularly sensitized to the major problems faced by the developing nations and to the fact that conditions along the US-Mexico Border reflected many of the problems that we had been discussing. Both Drs. Russell's and Nichols' presentations, as well as others, struck a particularly resonant chord. The highly mobile population along the border, the problems of continuity of care, rural health and rapid migration to the cities are characteristics of both sides of the border. Drs. Laguna and Russell emphasized the need to teach people how to care for themselves and how to obtain health services. They both placed emphases on food, nutrition, safety of water and sanitation as well as maternal and child health.

Dr. Nichols described the advances the University of Arizona rural health program is making towards meeting the needs of the people of that state. After the meeting at the Institute of Medicine, Dr. Hamburg and I reflected on the proceedings in the context of the previous conversation with the Kellogg Foundation. The Kellogg Foundation has already made several grants to promote healthy lifestyles along the border and to train health professionals. We thought of holding this present conference to build on the work and the

accomplishment of others to improve the health and quality of life of the millions of people who live along this long and tortuous border. Scores of millions of people, as you heard, cross this border each year for varying periods of time, enhancing the complexity of the health problems of the region. While the nature and extent of these problems are known in general terms, better data might be needed so that providers on both sides of the border can best use available resources to improve health services. Because the Carnegie Corporation is just beginning to explore these matters we turned to an expert to conceptualize and organize the corporation's first venture in border health.

Dr. Yvonne Russell's excellent and relevant experience and the track record of the University of Texas Medical Branch at Galveston caused the Carnegie Corporation to ask them to convene this meeting on the nature of the gaps in health services along the border and, particularly, strategies to fill these gaps. The state and local governments on both sides of the border, the Pan American Health Organization and the US-Mexico Border Health Association particularly, Dr. Herbert Ortega, have been supportive and helpful in the planning of this conference and we count on their continued participation and assistance to complete our task.

The Carnegie Corporation does not have large sums of money. Its resources compared to those of the public sector are minute. However, Carnegie can be an effective catalyst, and fund programs that, for one reason or another, are difficult for governments to fund. Carnegie can take a risk on a good idea and can stimulate the forging of more effective linkages between professionals and policy makers. This meeting will help Carnegie to decide if there is an effective role it can play to improve the health of the people in the border area and, if so, to establish priorities for grant making along the border under its program concerned with strengthening human resources. Should the strategies for improving health that result from this workshop be amenable to other foundation support, steps will be taken subsequently to interest potential funders. The Carnegie Corporation has wide ranging interest in the relations between the United States and Mexico in health, education and the economy. The Carnegie Board of Trustees at its retreat in May, 1985 will spend the entire time on these issues. The first tangible expression of the interest of Carnegie in these areas is to think through what we might contribute to health along the border that we share with our Mexican neighbors. I thank you all for coming and look forward to working with you.

BORDER HEALTH: THE PERSPECTIVE FROM THE UNITED STATES

Mr. John Kelso
Deputy Administrator
Health Resources and Services Administration
US Dept. of Health and Human Services
Washington D.C.

I bring greetings from Secretary Heckler, who was originally invited to be here, but could not attend. I would also like to reinforce the long tradition that the US Public Health Service (USPHS) and the Department of Health and Human Services have had working on the border, throughout many years, with the people of the US and Mexico to insure the best available

health care for people on both sides of the border. We intend to continue to do so.

I wish to describe to you some of the programs that the federal government is engaged in which relate to border health care. The first is in the area of primary care and community health centers. The USPHS has been in the community health center "business" for about 15 years. For example, there are several community health centers in South Texas serving migrant or Hispanic populations, as a continuing program of the USPHS, technically as part of a block grant program since 1981. The thrust of the federal government has been to work with states, to give them more autonomy and more authority in their own affairs.

The second program is migrant health, still a categorical program, but proposed to be in the block grant in Fiscal Year'86. This program provides services, largely ambulatory care services, from inpatient referral of migrants and seasonal workers, a good number of them in the Southern part of the United States. There are 500,000 migrants served in about 142 centers. Here again the federal government is trying to work more closely with states and local governments in carrying out this program.

The third program is maternal and child health, a block grant since 1981. There is a portion of the MCH block grant that is discretionary at the federal level, called SPRANS, which means Special Projects of Regional and National Significance. SPRANS is a 15% set aside that is used at the federal level to fund special projects, funded at 70 million dollars, for about 420 project grants in 1985.

Another program is family planning, a categorical program also proposed to be put into a block grant in Fiscal Year'86. This program which provides grants to state and localities for family planning services in 1985 provides services to about 3.7 million people in about 4,500 clinics throughout the United States, with a budget of about 142 million dollars.

I must also mention the National Health Service Corps, also part of primary care related to the distribution of health professionals. The Corps has provided scholarships for medical and dental students who, in return, are assigned to health manpower shortage areas. The peak years will be 1985 and 1986 with a somewhat smaller group at around 3,500 assignees in 1986.

Lastly I wish to mention health promotion and disease prevention, which is not a program in the USPHS that one can readily identify because every public health service agency has responsibilities for pursuing health promotion and disease prevention.

BORDER HEALTH: THE PERSPECTIVE FROM MEXICO

Dr. Jose Laguna Garcia
Sub-Secretario de Investigacion y Desarrollo
de la Secretaria de Salubridad y Asistencia
Mexico, D.F.

It has taken a number of years, to bring to fruition a number of joint projects between Mexico and the US. Now the first thing we must do is to define the border. Although we could say it is 3,000 Km. long, or we could also say it consists of various political subdivisions: 4 US States, 6 Mexican States, 25 US Counties, 35 municipios, we could also say that the border is merely a place where groups of people live.

I think we should speak of the border as a dynamic structure, which has the characteristic of being populated by people for various periods of time, and for various reasons. One study in 1977 showed that the workers who migrated from Jalisco (we don't know how long they stayed) tended to go to Arizona, California, less to New Mexico, Texas and the rest of the US. The figures on migration to the US show that the majority come from the states of: Baja California, Sonora, Chihuahua, Jalisco, and Guanajuato. Migration from other states is minimal.

This migration pattern impacts on our health problems. First, we have a total population of 82 million, 34 million of whom are employed and so are eligible for and have health care through Social Security. Thirty Eight million are unemployed or employed only part-time. Of these, 14 million are in urban areas and 23.5 million in rural areas. It is in this latter group that we find migration to the border and from there, to the US side. Within the rural population there are some that have specific health services, but 14 million have none. We must look at these groups in a social, anthropological, and cultural context or else we cannot work with them nor be of any benefit to them. These groups came from rural societies with a classical subsistence economy. They consist of diverse ethnic groups, have distinct customs, cultures and diverse religious attitudes. They are isolated and are unaccustomed to participation. Their levels of education and knowledge of hygiene are quite low. They are undernourished, have a high incidence of infectious disease, high infant mortality levels and a high birth rate.

Without a doubt we have progressed. Our net population fell dramatically during the Revolution but has risen thereafter. Because of great efforts in public health, vaccinations, etc. we have had enormous success.

The rural population is what interests us because it contributes most to the migrant phenomenon. In maternal and child health, we know that only 23% of migrant women use any form of family planning, 30% do not receive prenatal care, 45% of births are attended by midwives, and 87% of children are breast fed, this latter fact is a good sign.

There have been substantial advances in our vaccination program and the majority of children are vaccinated. From a practical point of view if one vaccinated 80% of the children it is possible to break the cycle of transmission. Also, there are almost 80% of children who receive DPT and Small Pox vaccinations.

NATALITY, MORTALITY AND POPULATION GROWTH

Population growth has dropped substantially to 2.7% in 1980. There has been progress in life expectancy. Birth rates have fallen, but obviously because the nation is growing we still have high rates. However, the falling birth rate tendency signals a change in attitude in the population towards smaller families.

FAMILY PLANNING

Family planning has been mentioned above. We see that 75% of the women use no method of birth control. Why? To point out cultural aspects, here is where we get into social, cultural, and psychological problems. The women speak of being afraid of "getting sick." They speak of their husbands' opposition, about not knowing exactly what to do. They speak of religious

aspects as reasons for not using contraceptives. The truth is that we are faced with a constellation of problems that we cannot explain, one-by-one, but rather we must view them as a totality, it is the life style of these people. These are fundamentally cultural problems.

The health of migrants depends on solutions to problems that are multi-faceted. It is clear that no one action will result in success. To be able to improve health status it is obvious that we have to think about employment, education, family stability, housing, health, potable water, sewers, environment, nutrition and finally the availability of medical care and health personnel. If we wish to improve health status we must look beyond medical efforts.

Along Mexico's border of six states occur 34% of all births in Mexico, in 1981 a population growth rate of 2.3%, life expectancy of 62.4 years, and mortality of 5.9. The border is a high mobility zone that exists around sister cities. We don't have adequate data on those areas, only state-wide figures. We need accurate data for planning.

We think studies are necessary, i.e., research. When I say research, I don't refer to just any investigations, but to efforts in applied research including efforts to develop methods for changing attitudes and behavior. Progress is possible by research and development of effective interventions and application of those interventions. Application here refers to acceptance on the part of consumers. Many times the problem is not the lack of knowledge, or lack of services, but low acceptance rates. There is also difficulty in monitoring consumer and provider. We need research on new methodologies, processes and expansion of known methods along both sides of the border.

I'd like to say a few other things about "migrants." They come from rural Mexico, Central America, El Salvador, Guatemala, etc. It is a complex mixture of people who migrate and stay on either side of the border; and they stay for a day, a week, a month, who knows? We must be aware of this incredible movement and only by knowing the characteristics, the need, the demands of these individuals can we provide for them. We need research, demographics, (migration routes, economic data, time frames, work patterns) and vital statistics from both sides of the border regarding age, gender, birth rate, population growth, etc. What work do they do? How much do they earn? What is the level of education? The last main migrant research was done in 1977. We must start again. We know that the rates for a number of diseases are higher on the border than in either country at large; for example, tuberculosis, syphilis and hepatitis are problems on both sides. Disease patterns along both sides of the border must be precisely ascertained. Although we have statistics: morbidity, mortality and life expectancy, we also need to know other things such as factors causing alcoholism, drug addiction and accidents.

We must determine what health resources are available on both sides of the border, utilization rates, and why they are used or avoided. Is there continuity of care across the border, or are we just engaging in episodic care?

Primary care is the focus in the Mexican border cities, that together with community development, health education and voluntary health promotion are programs that unite medicine and sociology clearly aimed at women, the heads of households who are responsible for culture, the family and children. Nutrition is another focus, a scientific focus with practical and realistic efforts being made that can assist in maximizing results. Breast feeding and maternal nutrition efforts are also integral components of primary care.

We are working on coordinative efforts between primary and secondary care referral centers. We also consider it urgent to develop a clinical laboratory program that addresses both quantity and quality.

The Secretary of Health is also interested in occupational health. We are working at an institutional effort that is focused on epidemiological investigation based not just on demand but on the knowledge of the real causes of the problems of occupational health, be they accidents or illnesses. Above all we must have trained personnel to deal with these problems. We already have an ongoing program in the School of Public Health in which occupational health specialists are being trained.

Family planning is the number one public health problem in Mexico so we have to increase inter-institutional coordination, share the most adequate methods, continue socio-demographic studies and promote the participation of the male population. On the Mexican side of the border we encounter a very traditional culture that has left the men on the sidelines. We feel that the time has arrived to make a concerted effort to gain their participation and thus help resolve some of the problems we have encountered.

This has been a presentation of how we view the socio-cultural situation and how with some specific actions we could move toward a solution to the problem of those human beings that we have up to now been unable to clearly define or locate along the border. We haven't known exactly where they are, how long they will stay or what they will look like in the future. This is what has made it particularly difficult on the border and presents a tremendous problem to health providers. We do not have a captive audience easy to tend to, but rather an immensely mobile population. And because they are mobile and they live on both sides we must recognize it is a population that belongs to both countries all the time. Here it is impossible to define "residents" of Mexico, the US, Texas or Chihuahua. They are immensely mobile human beings for whom we must provide certain services in ways that are innovative.

I think the big problem we face is how to accept the responsibility of serving human beings, not to serve Mexicans or Chicanos or Americanos, but human beings and to do so we must work in accord, first in knowledge and then in specific programs to resolve these health problems.

HEALTH PROMOTION AND DISEASE PREVENTION

Dr. Edward N. Brandt, Jr.
Chancellor
University of Maryland at Baltimore
Formerly Assistant Secretary for Health
US Department of Health and Social Sciences

Thank you for the opportunity to discuss what I consider to be the most important activity that public health officials and all health care professionals can address: health promotion and disease prevention.

There are three essential approaches. The first of these is understanding the science base with which we operate. We must know what steps can be taken to accomplish the goals of health promotion and disease prevention. These must be based upon solid science and ideally will have measurable outcomes.

The second flows from the first, namely that we must continue to strengthen the scientific base for health promotion and disease prevention.

Additional vaccines must be developed. Also, early diagnosis must be a goal of additional research so that we can detect diseases at a time when intervention will stop the process; and we need to gain greater scientific understanding with respect to nutrition, exercise and how to change human behavior.

Third, we must constantly remind individuals of their opportunities and responsibilities to maintain and improve their own health status. The responsibility for health promotion and disease prevention ultimately rests on the shoulders of each individual.

Fortunately, we have had the benefit of two major government publications that have yielded us a wealth of information. These are the 1974 "LaLonde Report," or, more correctly, New Perspectives on the Health of Canadians, and the 1979 US publication entitled Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention. Those of us dedicated to the principles of health promotion and disease prevention have been guided and inspired by these two government reports.

I am not an authority on the "LaLonde Report." Therefore I will address my comments to Healthy People, which many of you have seen. Healthy People was based upon data contributed by some 500 non-government experts representing the medical, behavioral, statistical and social sciences. On the basis of that wealth of knowledge, we were able to draw up a set of national goals for the health status of Americans. These are levels of health we think our citizens should reach by the year 1990.

At the time Healthy People was published, in 1979, the infant mortality rate in the United States was 13.2 deaths per 1,000 live births. We expect to bring that rate down to fewer than 9 deaths per 1,000 live births by 1990. It is vital that we impress upon all women of child-bearing age the importance of certain risk factors, specifically smoking, alcohol intake and poor nutrition that can lead to infants being born at dangerously low weights, or with life-scarring birth defects. Those three life-style factors may well have more influence on birth outcomes for any woman than the quality of perinatal care.

Another goal for 1990 and beyond is to improve child health and promote optimal child development. If we are successful, the death rate for children age 1 through 14 should drop by at least 20 percent by 1990. To do this, we need to stay on top of an already successful child immunization program. This activity has been a major one for the US. We set for ourselves certain high goals: 95 percent coverage or better for all school- age children and we have achieved those goals in nearly every disease category. In fact, I am pleased to report that as of September 1983, we were 7 years ahead of schedule; nearly 97 percent of all children entering school for the first time were immunized against the major infectious diseases of childhood.

But, before we get over-confident, let me say that the immunization task is not done. There are some 3.6 million babies born each year who need to receive the same protection today's children have. Lack of the full immunization series is a major risk factor for our young children.

The effort we're making to get parents to "buckle up" their youngsters while driving in their cars is also a very important program, since it not only saves the lives of children but is another reminder to adults to belt themselves in as well. In Healthy People, we look toward a reduction of the mortality rate among adolescents and young adults. This is a fluctuating rate because primarily it reflects how persons in this age group 15 to 24 survive on our highways. Highway trauma is the leading cause of premature death among

teenagers and young adults. But it's also quite clear that alcohol is a key risk factor: half of all high school students drink in cars and almost 1 in 4 drink and then drive. We are duty-bound to do anything we can do to fight alcohol consumption among young people.

Another of our goals for 1990 is to reduce the mortality rate for persons age 25 through 64 by at least 25 percent. And we are making good progress. This generation is living better and will be living longer because it is the beneficiary of about 30 years of successful research on the detection and treatment of most of society's major killers: heart disease, cancer and stroke. One good way to maintain this progress would be to pass on to every adult the "prevention ethic." In other words, every American in the age group, 25 through 64, must be willing to do those things that are necessary for good health.

In addition to doing battle against the major killer diseases, we also need to help adult Americans maintain some kind of control over a variety of chronic illnesses, the kinds of disease or disability that won't kill them but will sap their vitality, limit the number of days they can work, and restrict their ability to function as parents, friends, or as spouses. For this age group we must intensify our efforts to detect diabetes, hypertension, asthma, and arthritis. And we need to care for those persons who are coming back into the mainstream of work after a heart attack or after recovering from injuries suffered on the job or in an auto accident. We won't be able to say we've been successful in adult health care until we know we've done everything possible to keep this vital, productive, governing age group active and on the job.

The last age group for which we have 1990 health goals includes men and women age 65 and older. Americans are living longer, but are not immortal. Our goals for senior citizens are realistic: to improve health and quality of life among our senior citizens and foster independent rather than dependent ways of life. Part of those goals can be reached by reducing the average number of days of restricted activity for older people to not more than 30 a year. This is a great challenge now and will be even greater in the years ahead, to 1990 and beyond when our senior citizen population will increase to close to a fifth of our total population.

Even now, 80 percent of the elderly have one or more chronic conditions and the cost of their medical care takes up nearly a third of our total national health expenditures. Hence, if we can bring about any reduction in the number of restricted activity days, it would show that we're making progress in our fight against chronic and acute disabilities and disease conditions.

These, then, are some of the goals and issues in health promotion and disease prevention. They are organized generally around the five broad age groups within our population. And the underlying logic for them all is the twin premise of health promotion and disease prevention, drawn from the Surgeon General's report, Healthy People.

There is no doubt the US can reach those goals. We have both the knowledge and the will. With the full understanding and active involvement of everyone in public health, we can reduce the numbers of premature, needless, tragic deaths among infants, children, and young people, reduce the incidence of the killer diseases: heart disease, cancer, and stroke among our most productive citizens and help them cope with chronic disease and disability and we can provide a more healthful, caring environment for our aging citizens.

Dr. Dionisio Aceves Sainos
Departmento de, Medicina Preventiva
de la Secretaria de Salubridad y Asistencia
Mexico, D.F.

I will speak about health promotion and disease prevention but first we must share some background.

Frontiers are laboratories for studies. They are artificial boundaries. In democratic societies they are exceedingly open and allow changes in customs to occur: religious, sociological and political. A consequence of these processes is that the residents of the frontier consist in part of a "floating" population and with varying possibilities of assimilating or settling-out. They tend to have characteristics which are distinct from their counterparts in other regions. The US and Mexico share a frontier that is one of the longest, widest and freest in the world. These factors find expression and impact on health matters.

Mortality

1974 data indicate three disease entities account for the greatest mortality in Mexico, but we have recognized considerable decreases in several others. There was a 12% reduction in death rate of the border states compared to the national rate. Nuevo Leon witnessed a 25% decrease. With the sole exception of the state of Chihuahua, the other 5 states witnessed infant mortality rates less than the national average. The reduction was a little more than 10% and Tamaulipas witnessed a rate 31% lower.

Mortality is now led by two groups of infectious diseases, respiratory and enteric diseases which accounted for 114,542, deaths, 26.3% of total deaths. A third infectious disease, tuberculosis, accounted for 2,614 deaths. Accidents, poisonings and deaths by violent causes were the second leading cause of death. Heart disease, malignant tumors and strokes, that is, the causes most commonly associated with the leading causes of death in developed counties are far behind as the 4th, 5th and 6th leading causes of death, combined having led to 76,966 deaths, 17% of the total.

These observations led us to conclude that while general mortality in 1974 was attributable to various causes, it presented an array common to developing countries, but had some similarities to those more economically advanced.

In that same year, 1974, however, the leading cause of mortality in Mexico border states was heart disease, 8,139 persons or 13.1% of the regional total. This was followed by accidents, poisonings and violence. Malignant tumors and cardio-vascular diseases reflected levels similar to the national level. Infectious respiratory and gastrointestinal diseases were the next leading cause of death and together they accounted for 12,883 deaths, or 21.3% on the regional total. Additionally, it is interesting to observe that deaths attributed to tuberculosis on the border accounted for 22.9% of total national tubercular mortality or one in five deaths from tuberculosis occurred in the North of Mexico. I believe that the border incidence of tuberculosis can be explained by better diagnosis and accumulation of morbidity statistics by the health authorities in those regions.

The conclusion reached from these observations is that mortality characteristics on the border are similiar to those of developed areas. Together, these findings signal the necessity to fund more adequate diagnostic capability. We must somehow come to adequately setting health priorities on the border. Regardless of what is done to resolve some of the health problems, one must address the issue of health promotion always keeping in mind that we must stress the individual's responsibility for his/her own health and well being. We must also address disease prevention, environmental health, and certainly, nutrition.

Mexico's National Health Program, 1984-88, calls for a number of actions. Health promotion and general preventive measures form the nucleus of the effort. There must be a clear health education focus. In addition we have targeted nutrition, occupational health, and a program against drug abuse. We will also address immunizations, epidemiological surveillance of infectious diseases, detection and control of degenerative diseases and accident prevention.

We must also state that there are numerous other substantive efforts that fall within the above categories. Of course we will continue our long standing efforts at sanitation and environmental control, but also, more recently, harmonious population growth through family planning. Strategies to accomplish our programs include political and administrative efforts to promote the participation of the community, something that is indispensible for the execution and consolidation of all health programs.

The Mexican government has prioritized prevention and will continue to combat all health problems. Thanks to the strategy of decentralization, program administrations on the border are in accord with the central government level and methods and have their own specific regional plans as well.

I will make brief reference to the functions of our health institutions. The Secretariat of Health is the group that does the most program planning and directs these programs for the majority of people. Programs are aimed at populations with similar characteristics, even primary care in rural areas and marginal urban areas. The Institutes of Social Security, because of the fact that they deal with populations with higher educational and economic levels than the national average, are generally able to realize greater efficiency in their health promotion efforts to control or decrease illness.

With respect to preventive medicine and diseases subject to immunization, in 1985 and in the next three years we will realize effective control of whooping cough and polio. Our well child program also impacts indirectly on other illnesses: diarrhea, bronchitis and malnutrition, all of which influence infant and early childhood mortality.

In reference to chronic or degenerative conditions, accidents, violence and other social ills we have educational campaigns and screening programs to catch the conditions early. Medical care has reached new levels of efficiency, but there are still large numbers who do not have access to such services.

The objectives delineated for our national health program are realistic and achievable but they could be surpassed with a concerted effort to implement more effective and efficient programs and actions.

Finally, I want to express that the work this binational group is doing here today contributes to solutions to problems of health of the population on the border and your actions will have positive effects on the rest of the population as well.

MATERNAL AND CHILD HEALTH AND FAMILY PLANNING

Dr. Manuel Urbina Fuentes, Director
Departmento de Materno-Infantil
de la Secretaría de Sulubridad y Asistencia
Mexico, D.F.

Study of socioeconomic and demographic patterns of the northern border region of Mexico has been of particular interest because of the contrast with the general pattern observed for the rest of the country. Many factors have contributed, in particular, the uneven development of the economy of Mexico as well as the strong social, cultural, and economic influence of the U.S.A. The population of the six states of the border has quadrupled during the last 40 years, while the population of the rest of the country tripled. During these years the total population increased from 2.6 to 10.6 million along the border.

The average rate of growth observed in the border region during the last 4 decades, above those for the country as a whole, is due to the decrease of mortality in the region, a 60% decrease during the last 40 years, to 7.5 deaths per thousand inhabitants, in 1979. The birth rate in the border region, during the past four decades, follows a pattern similar to the country as a whole, indicating high and consistent levels of approximately 43.0 births, average. In 1940 the birth rate was higher in the border area, 49.3 births per one thousand inhabitants as compared to the national of 44.6, whereas, by 1979 the border birth rate had dropped to 31.2 as compared to the 34.0 for the country as a whole. As a result of the mortality and birth rates, the border region shows a population less than 15 years of age which goes from 40.9% in 1940 to 46.0% in 1970.

FERTILITY

A decrease in birthrate from 1970 indicates the beginning of a downward tendency in the fertility of the border region. The border global fertility rate changed from 6.03 children in 1971, per woman, 15 to 44 years of age, to 3.86 in 1979, vs. 6.6 and 4.6 at the national level for the same years. This situation is the result of a significant downward trend of the fertility rate in all age groups. The fertility rate in all six border states is one of the lowest in the country, linked without doubt to the socioeconomic differences that distinguish the border region from the others, and to the use of contraceptive methods.

BIRTH CONTROL

In 1979, the use of contraceptive methods indicated a utilization in the six border states greater than the national level (31.9% for the border region vs. 26.1%). Such a difference increases if we consider married women and women living with a partner (on the border 49.9% vs. 40.0% nationally). For 1982, the use of contraceptives increased in the border region to 36.6% for women in their fertile years and to 58.0% for women cohabitating with a partner.

The methods most used in order of importance are: pills, IUD, and surgical methods. In reference to the use of the pill, it is important to stress the large percentage of women using the pill; 50 of every 100 women

using contraception use the pill. It is also important to mention the use of this method by older women, where presence of side effects is higher. We note also that less importance was given to surgical methods in the border region, 20.6% vs. 23.3% at the national level. In the border region the use of effective contraceptive methods is greater for all age groups than in the rest of the country. Spacing and limitation of the number of births is controlled by the use of contraceptives in the border region.

The age distribution in the use of these methods indicates definite patterns in the border region and the country. The proportion of pill users decreases with age, while the proportion of surgical methods users increases. We must point out that there is a tendency for women older than 30, particularly in the group 30-34, to use IUDs or surgical contraceptive methods, and for the younger groups to use different methods, basically the pill,

In regard to sources for obtaining contraceptive supplies, the source depends on the method used. The private sector shows greater participation in the border region than at the national level. While 51.6% of women at the national level obtained their contraceptives from the public sector, only 44.8% so obtained them in the border region. Public sector participation is more a dominant factor outside of the border region than within.

The contribution of the family planning programs to the health sector in the border region is worth taking into account. From the end of the decade of the 1970's to the beginning of the 1980's, the number of women enrolled in the programs of the government and private sector increased systematically. These programs have focused mainly in the rural areas. In regards to family planning, it is important to point out the labor performed by the IMSS and the SSA. The number of women who joined the rural programs of these institutions increased 143% from 1979 to 1982, while for the urban area the increase was only 46%.

MATERNAL AND CHILD HEALTH CARE

The main concerns of maternal and child health care are the reduction of maternal and child morbidity and mortality. It important to expand maternal and child health services as well as to provide for the education and nutrition of the population. An expansion of services will decrease the negative health effects caused by a lack of maternal and child health care.

Socioeconomic conditions in the border region are better than those in the rest of the country. Several indicators confirm this: more literacy, more protein consumption, better living conditions, greater use of resources directed towards health care, among others.

Better living conditions of the northern border region of the country influence the infant mortality rate: 49.0 deaths for every 1000 births in 1979 in the border region, vs. 54.0 at the national level. Another indicator of the positive effects on health of better living conditions is the rate of pregnancies with positive results, which is greater in the border region than in the national level (94.5% vs. 92.8%). Adverse results are less along the border because of every 100 pregnancies, one results in a stillbirth and less than 5 in abortions, while at the national level the proportion is almost 2 stillbirths and slightly more than 5 abortions.

The proportion of women who received prenatal care is greater in the border region, 87.0% vs. 80.5% at the national level. A common factor for the border and for the country is that the proportion decreases as the age of women increases and this is due to the fact that more younger women tend to

seek prenatal care. Women tend to seek prenatal care during the first trimester of gestation, but in a larger proportion in the border region than in the country as a whole (69.5% vs. 62.5%). In the border region, delivery care reaches almost 100% (99.2% vs. 97.3% at the national level)

In regard to public and private sectors meeting maternal and child demands for services, the largest proportion of border women were assisted during their last delivery by medical personnel from the public sector, in 1979, 63% in the border region vs. 47.8% for the national level.

Of those women who report seeking abortion services, the border region shows 65.8% go to public service vs. 74.3% for the country. This leads to the conclusion that part of these women seek medical attention in the U.S.A., given the proximity.

GUIDELINES FOR ACTION

The measures taken in Mexico in regard to family planning strengthen changes in the patterns of reproductive behavior, leading to a decrease of fertility and, as a consequence, a decrease of deliveries. At the same time, more and better health care services and physicians are available to the population in general. Such measures favor changes in reproduction and facilitate qualitative and quantitative changes in economic, social, and health aspects, increasing health levels of the population by making such services more accessible and available to them. The better socioeconomic conditions of the border region have played a very important role and will continue to do so.

In order to continue in the right direction we propose the following lines of action:

-- To increase coverage in the use of contraceptives in rural areas by means of increasing the retention of users in the programs.
-- To encourage the participation of voluntary social health agents in the area of family planning and maternal and child health services in the rural area.
-- To fight the presence of negative results in pregnancies (abortion), intensifying the use of contraceptive methods with lesser risks and side effects.
-- To intensify educational aspects in regard to family planning for the population in general, stressing the importance of such practice in order to reach the objectives for collective and family reproductive behavior.
-- To increase the knowledge about the evolution of these aspects by generating statistical information of the region.
-- To intensify the education on family planning among the young population, in order to decrease unplanned pregnancies and the presence of side effects due to the use of inadequate contraceptive methods.

Dr. David Warner
Lyndon B. Johnson School
University of Texas
Austin, TX

My colleagues and I spent two years working with the American Academy of Pediatrics trying to develop statistics on maternal and child health on the

US-Mexico border. The most dramatic experience we had was visiting some of the newest areas and viewing the tremendous migration to the border, both on the Mexican side and on the US side. In Mexico, we had only to go south of Matamoros or into the areas surrounding Juarez to see people who don't have water and sewage, who are not well educated and who may be from Central America or the mountain states in central Mexico, in order to appreciate the severe problems that are present. I think some of those problems are or will continue to be seen also on the US side of the border. Because there is employment back and forth across the border and all sorts of other relationships, it is extremely important that people really understand that the problems are in some ways far away from the border, i.e., the responsibility lies at the national capitol. I would strongly urge anyone who has never been to the poorer parts of the US or Mexican side of the border to pay a visit in order to understand what the conditions are.

I intend to address the gaps and perhaps some of the priorities which might be set in terms of an initiative on the border. I will speak to four separate issues of 1) population structure and vital statistics, 2) public health problems and programs, 3) health services delivery and 4) training programs.

Demographically, patterns of migration inside Mexico are altered because the terrain is divided by mountain ranges. On the US and Mexican side there are really no highways that go through the border. In other words, the highways come up to the border from the Mexican side and go down to the border from the US side, and then there are the cities of Brownsville-Matamoros, El Paso-Juarez and San Diego-Tijuana, etc. Generally, in these areas, the populations are not people who grew up there but, rather, people who moved there both from the interior of the United States and the interior of Mexico. In 1900 there were barely one hundred thousand people on the Mexican side of the US-Mexico border; there are currently in excess of 5 million. Similarly, there was not a large number of people on the US side, but the rate of growth has been extremely rapid and will continue to be so. Estimates are that in 1980, on the US side there were about 400,000 children under the age of five and more than that on the Mexican side. There are more children along the US border in extreme poverty than in the balance of the four US border states.

In terms of infant mortality, at least on the US side, Mexican Americans do not seem to have as severe problems as other groups, even though the Mexican American population has much less income. There is no demonstrable difference in infant mortality between the Anglo and Mexican American populations, even though a very high percentage of Mexican American babies, in Texas at least, are born out of the hospital. One of the greatest priorities is to try to get accurate data on both sides of the border. One might want to start a statistical study with a pair of twin cities, Matamoros-Brownsville, El Paso-Juarez or Tijuana-San Diego. A bi-national research team should examine a two to four percent sample of households, with medical workups for a certain percentage as well. We must clearly delineate the living conditions and distribution of people with a professional bi-national team, independent of either government. We should be able to get support to deal with problems of inadequate nutrition, sewage disposal and potable water, for example, reasonably rapidly and funded at an adequate level. Realistically, we may not be able to do everything.

The second issue relates to the accumulation of vital statistics on both sides of the border. On the US side one of the greatest problems is natality statistics. It is very difficult to know whether women giving birth are US citizens, US residents or just crossing for the purpose of giving birth. On the Mexican side there is a further problem, (in addition to perhaps not all births being reported) of statistically tying births and deaths together.

In our studies in Laredo-Nuevo Laredo we investigated each infant death and tried to tie it to the birth certificate. We were only in hospitals and only able to find about 20 percent of birth certificates but it was a very useful study. From 1980 to 1982 there were 77 infant deaths out of 10,976 live births in Laredo, for a very low infant death rate. About a third of mothers were Mexican nationals who gave birth in Laredo. During the same period there were about 567 infant deaths out of 15,000 live births in Nuevo Laredo, for an infant death rate of 37.1. One of the interesting things we found was that around two thirds of the infant deaths of Nuevo Laredo were post-neonatal deaths as compared to about ten of the deaths in Laredo, which indicates that a lot of the deaths are not tied necessarily to the birth process itself, but to other things in terms of nutrition and sanitation. This is no surprise, but helps to target the problem, if one can obtain these kinds of vital statistics. Perhaps two cities could be "tied together" to obtain vital statistics, to track where births occurred and where the mother resided. When there's a death one must know where the child was born in order to tie births and deaths statistics together.

Health departments on each side of the border should develop a joint border health department, at least to do classic public health activities, for example, in Laredo-Nuevo Laredo. Perhaps we should not select two large cities initially. Personnel could work on both sides of the border in areas such as environmental health, well child care and prenatal care. Joint activities led to a great deal of understanding where they have been initiated.

In terms of health services delivery there are a number of gaps and problems. For instance, undocumented aliens in the US often receive certain public health treatments and go to clinics, but there is no financial support for hospital care. Often there is no knowledge of how to refer the person back to the Mexican side. Thomason General Hospital in El Paso does have a program in which persons who aren't eligible for admission are assisted in finding appropriate referrals to services on the Mexican side. Referrals on both sides could be improved a great deal with joint directories of available services, the development of referrals through social workers, and through the development of the capacity of both sides to treat problems which might emerge on the other side.

One of the greatest problems on the US side is the lack of public hospitals along the border. In Texas the only public hospital on the border is Thomason General, a county hospital; but one still must be a US county resident to be treated there. In Arizona and California there are no public hospitals on the border; there are two university hospitals which are in the position of taking care of a large number of indigents and undocumented persons, but somewhat unwillingly or reluctantly, given their financial capacity.

On the Mexican side there are also problems in terms of comprehensive hospital care for persons not covered under the Social Security system. Mexico tends to have civil hospitals and charity hospitals, but often they tend to be

somewhat less well funded than the Social Security hospitals. This is a difficult problem on both sides of the border, and leaves a large sector of the population with somewhat limited access to hospital care.

There are also maquiladoras, twin plants, which should be encouraged to develop programs, especially in maternal and child care, since such a high percentage of their employees are women of child bearing age. Exactly what could be worked out and what kind of relationships could be established are the problems that the US and Mexico must address.

Finally, there is still a great deal of possibility for exchange in training programs. There are limited relationships of universities on both sides of the border but these should be improved by much more sharing of students and resources. Finally, state health departments should plan for developing shared staff at the state levels. There are some real possibilities here which would not be costly.

PRIMARY CARE

Dr. Andrew W. Nichols
Department of Family and Community Medicine
University of Arizona Health Science Center
Tucson, Arizona

I will discuss primary care as follows: first, the definition. Secondly, primary care along the Arizona-Sonora border and finally, primary care in border health. Primary care, simply stated, is the first contact in medical interaction between a health care provider and a patient. In Manpower Policy for Primary Health Care published by the Institute of Medicine, it is described as the first level of personal health services where initial professional attention is paid to current or potential health problems. Generally speaking, the primary care providers in medicine are found in family medicine, internal medicine, pediatrics and obstetrics and gynecology. It is important to note that there are many other primary care providers including nurse practitioners, physician assistants, osteopathic physicians, and many other health professionals, including chiropractors, naturopaths and pharmacists.

There is a particular aspect of primary care recently called community oriented primary care, or COPC. COPC recognizes the importance of integrating preventive health services into the practice setting and the development of comprehensive medical practice. The term "community oriented primary care" has been defined by Drs. Joe Abramson and Sydney Cart as the provision of primary clinical care for individuals and families in the community, with special attention to the continuity of care, and with a focus on the community as a whole and its subgroups, when appraising needs, planning and providing services and evaluating the effects of care.

COPC looks at a denominator population defined as the neighborhood or all of those eligible for services offered by the primary care practice in question. It expects the providers in that practice, with outside assistance as required, to survey the population and to determine needs. Once a needs assessment has been completed, a plan of action is instituted and subsequently implemented. Finally, evaluation of overall impact of intervention takes place.

COPC offers a model for health practice which combines all of the elements necessary for a truly healthy environment. Dr. Jack Geiger has defined COPC as the synthesis and the assembly of familiar components of community orienta-

tion, demographic study, epidemiologic investigation, personal medical services, environmental intervention, community organization, and health education into an ongoing whole. Such a definition of community oriented primary care describes the comprehensive scope and potential of primary care practices in border context.

Primary care is still the dominant mode of practice along the Arizona-Mexico border. Until recently, most of the practitioners along the border, at least on the Arizona side, were physicians, osteopaths and general practitioners. A few specialists, including family practitioners, could be found. In some places, however, practice patterns are changing. Certain islands of excellence, if you will, with an influx of new specialists, are developing in areas and communities such as Nogales, Sonora and in Yuma along the Arizona side of the border. Other smaller communities are little better off, however, than they were a decade ago. Some, particularly those of 2,500 residents and under, appear to be less well provided for than they were even a few years ago.

The background paper distributed at the beginning of this meeting Community Health Action on Wheels; Primary Care as a Vehicle for Community Change, provides one illustration of the approach being suggested. That is, primary care, particularly community oriented primary care, can provide the impetus for comprehensive community development, including quality health care.

To the degree that the Arizona model might work elsewhere, it is recommended for consideration. This paper provides a history of the mobile clinic unit used in five rural entities of southern Arizona between 1975 and 1980. The communities served ranged in population from 100 to 5,000 and ethnic composition was quite variable. The actual time spent by the mobile unit in any given community ranged from a few hours every two weeks to three days per week. Three of the five communities served as a result of the mobile unit ended up with their own permanent clinics, and the other two experienced increased coordination with and utilization of an existing, almost 100% federally sponsored clinic. In addition to the actual medical services rendered and put in place for future use, various environmentally related community improvements took place in the target communities. The program has been a consistent success in producing community change, as well as providing personal health services.

The Community Health Action on Wheels (CHAW) paper goes on to present the story of the latest use of the mobile unit in the southern Arizona environment. This has been in the small community of Continental, near the much larger retirement area of Green Valley. Continental is basically an Hispanic community populated by migrant, seasonal farm laborers and a variety of low income residents. It has been taken from a medically disorganized community with no clinical services to its current status of having a clinic operating as part of a larger consortium of clinics. The United Community Health Center (UCHC), which evolved from this effort, now consists of three community clinics, widely separated geographically and served by an administrative staff housed in the rural health office in Tucson and responsible to a board of directors chosen from each of the participating communities. There is one board constituted of representatives from all of the communities.

The UCHC program operates on a federal community health center grant award and has shown itself to be increasingly effective in meeting the needs of the diverse communities represented. UCHC represents a health services network, or consortium, under development in Southern Arizona.

Another program at the University of Arizona, the Southern Arizona Health Education Center, SAHEC, represents an educational network or consortium developing in the UCHC service area and beyond. SAHEC, funded October 1, 1984, proposes to bring regionalized health science education to the poor in Arizona counties bordering Mexico: Cochise, Santa Cruz, Pima and Yuma. In this region, two AHECs will be created, one based in Nogales and the other in Yuma. Learning resources will be distributed throughout the region. The focus of the SAHEC program will clearly be on primary care because of the preeminent importance of primary care in an otherwise medically underserved region which has referral capability to nearby metropolitan areas such as Phoenix and Tucson. The potential integration of the education effort as represented by the SAHEC and service efforts as represented by UCHC offers a challenging opportunity for the future along the southern Arizona border.

A new development sponsored by the federal government which would promote such integration is the concept of a primary care consortium. Already referenced in the discussion of UCHC, a consortium as defined by the Bureau of Community Health Delivery and Assistance, would include community health centers, regional hospitals, public health departments, private practitioners and others interested in merging their efforts. The concept has not been well defined as yet but offers a basis for creating program building throughout the border area. As consortium development occurs, it is likely that primary care practices along the border and elsewhere will increasingly relate to prepaid health care plans. In this context it is further likely that the community health centers, as well as hospitals, will bind together for more effective utilization of services. Increasingly, network development is occurring throughout the area linking hospitals, primary care clinics, private practices, public health departments and others in joint efforts in the planning of health care delivery. State health departments, primary care associations and health science institutions of higher learning will and should be a part of this process. In Arizona such a partnership is under way with particular emphasis on primary care.

The close relationship of primary care to environmental, occupational and child health as well as many other kinds of health care is characteristic of a comprehensive health care delivery system and is being demonstrated through the CHAW model. At its best, primary care in Arizona will be the basis for a quality health care delivery system along the border, drawing upon the resources of all those responsible for the public's health.

The health problems of the US-Mexico border are basically primary care problems. The conventional approach to these problems is to fractionate them into their component parts and to support them categorically. Traditionally this has meant significant support for programs such as child health, childhood nutrition, immunization, maternal health, and so forth. Primary care brings a more holistic approach to the issue. It begins by giving people what they want, then expands to offer people what they need. The ultimate determination of need is made by the recipients of services themselves working closely with providers of care. It is suggested, therefore, that primary care offers a mechanism for introducing everything from occupational health to environmental

health, from street lights to sewer systems, from maternal and child health programs to geriatric programs. Primary care brings credibility and assures continuity for other program efforts; it is the glue which holds the rest together.

For some years the rural health office in Arizona has been proposing to various funding agencies that the CHAW concept has validity and should be funded for a more extensive test. Frequently the answer given is that mobile units are too expensive, or that changing population patterns make them obsolete. The traditional response of the rural health office to this argument is that CHAW works, and it could be made to work elsewhere. What is needed is a new orientation to the use of primary care in general, and mobile units in particular, as vehicles for community change.

Such centers of activities then become the basis for all other health related services initiated in the community.

There will continue to be requirements for disease control programs and ancillary health services along the border. The environmental and occupational health issues are likely to grow in importance in future years. Programs should be put in place now to meet the many legitimate needs in these areas. It is my thesis, however, that such programs will be most successfully introduced and operated in the context of the health care delivery systems built around primary care. It has long been my contention that much of the responsibility for fiscal activities called for will be at the local level. Not only must local boards of directors be formed to run non-profit corporations, but the tax base of the participating communities must be tapped. Formation of a special district, e.g., a health service district by the local populace, is one way of generating such support. Such a development requires electoral attention and indeed must be popular. This can only happen for something generally conceded to be of value to the community. This something is usually not a preventive health program but is a primary care program.

In summary, I have discussed the importance of primary care to the improvement of health status along the US-Mexico border. Primary care has been defined and characterized with particular attention given the newest variant of the model, community oriented primary care, COPC. In addition, I have discussed primary care on the Arizona border, with particular emphasis given to Community Health Action on Wheels, CHAW, a model program. This concept of using a mobile unit to produce free standing or linked community health centers was explored, as was the development of the Southern Arizona Health Education Center, SAHEC, project. The relation of the service and educational models to consortia development was considered. Finally, I have concluded with a rationale for the use of primary care for border health, noting most, if not all, the programs felt to be desirable for everyone included could be provided under an active primary care program. Primary care can become the vehicle for attracting consumer participation leading to potential funding sources and other resources for the program.

An initiative in primary health care along the border can be designed to fill gaps in health care services.

Dr. Amador Flores Arechiga
Jefe, Servicios Coordinados de Salud Publica
En El Estado de Nuevo Leon
Monterrey, Nuevo Leon
Mexico

Along the State of Nuevo Leon-US border of 20 kilometer we have a primary care program which has been operating for nine years, is multidisciplinary and includes nursing, dentistry and medicine, particularly family medicine, and has interinstitutional services between The Office of the Secretary of Health and The University of Nuevo Leon. This program has, since its inception, received economic support from the Kellogg Foundation.

Migration is so acute in Nuevo Leon that there are a number of small communities (pop. 2,500 or less) that will disappear in 20 years. In reference to the discrepancy between Mexico and US death rates let me say that is is a transitory phenomenon. Our low death rate is attributable to our past high infant mortality rate. As our MCH programs have matured, our infant mortality continues to drop and as these people grow older, reaching to old age, our death rate will rise accordingly.

I'd like to recount some of our direct experiences. In Nuevo Leon the first health services were at the tertiary care level. This has only changed in the last nine years. Until then the only service available was a tertiary care hospital that offered all three levels of care and this is still in place. Emphasis on primary care world-wide gathered momentum in Monterrey and our primary care program was started. I'd like to say a few things about it.

There is no entry into a system when there is no system. We have had primary care in some areas, but there has not been a system. In our judgment, the lack of a health system in our circumstances is attributed to social, economic, educational, political and institutional factors. In our country particularly, those without insurance have difficulty entering the system. Sometimes we believe that the system is in place, but we do not ask ourselves if the people know that it is in place, or how to get into it.

A level of primary care that is not an integral part of a system does not really permit "entry" and it loses credibility in the face of specialty health services that are not effective nor readily available at these levels. It has been our experiences that hospitals do not resolve the problem of communication. When a system doesn't exist and we have designed our program as educational, our question is how to teach and what to teach? If one believes that education is only a matter of more resources and more personnel to address the needed additional services, and to conduct research, I ask how does one do that in an ill-defined or non-existant system?

We are working on defining our system to serve as a point of reference, but it seems to me that the system goes one way and educators another, without regard for our health and social needs from the health system. This health non-system has taken on a life of its own and has started to impose itself and possibly not in accord with social needs.

We have some indicators that may be useful regarding the quality of primary care. For example what primary care encounters reveal is that there is insufficient attention to promotion of health, for example, well child efforts, prenatal care and family planning. By contrast primary care usually takes care of illness rather than health promotion.

The human resources we deem necessary at the primary care level are Family Medicine, Community Health Nursing and Health Promotores. Our priorities are mental health, diabetes, hypertension, tuberculosis and the elderly. Tuberculosis is increasing and studies reveal that we may not even be reaching 20%. The other 80% go untreated. The numbers of elderly are growing and require special attention that we are not able to provide either in personnel or technology.

We believe that our next step is to structure a second level of care so a system of communications will exist between the various levels to guide our consumers. We have found that by using students we can lower costs of services by 30% and costs of education by 40% and education is direct (hands-on). How such a system would fare regarding the development of competent doctors must be left to future evaluation.

Nuevo Leon is a rapidly developing metropolitan area with substantial rural in-migration, the largest of either Mexico or the U.S. One of the major problems associated with such rural-to-urban migrations is in the area of mental health, particularly in those people who are used to rural simplicity and are returning from temporary work in the U.S. With their experiences in a strange culture and with strange language, no wonder there are severe mental health problems.

THE ROLE OF THE PAN AMERICAN HEALTH ORGANIZATION

Dr. George Alleyne
Director of Health Programs
Pan American Health Organization
Washington D.C.

The Pan American Health Organization capabilities originated in and include the concern to control communicable diseases and deal with the movement of people and diseases across national borders. The Pan American Health Organization has provided technical assistance to participating governments and institutions, and disseminated information mobilizing and utilizing existing resources. Maternal and child health are our main focus with respect to present problems, in specific terms and specific interventions. We are concerned with the establishment of norms and management practices, e.g., vaccination programs, and then to put established knowledge into a form that addresses problems of maternal and child health.

The Pan American Health Organization is also interested in establishment of networks of educational institutions, to fit them together in order to provide critical information, which often is of epidemiological, financial, technical and programmatic natures. Further, the Pan American Health Organization is concerned with the training of health professionals. We do not compete with universities; we help coordinate bi-national efforts. Many countries do not know of the expertise we have available in-house.

The Pan American Health Organization has a social role inasmuch as health is a non-conflicting area, a vehicle, a bridge to bring people together.

The Pan American Health Organizatin has long been active in efforts along the border. We have been concerned to assure that Pan American Health Organi-

zation bi-national efforts be assisted by the institutions that have something to offer. The Pan American Health Organization can help facilitate health efforts along the border, and is ready to join other institutions in this needed effort.

The Pan American Health Organization and the Carnegie Corporation of New York activities will no doubt continue. Our relationship has been fruitful and we will continue our interest and efforts together.

THE PERSPECTIVE FROM A FOUNDATION

Dr. Robert Sparks
President
W.K. Kellogg Foundation
Battle Creek, Michigan

The W.K. Kellogg Foundation is currently reviewing programs for Latin America so the discussions of this conference, both formally and informally, have been of interest and concern to Kellogg. What would influence a foundation with an interest in Latin America to take new directions, to assist in addressing health problems in Latin America? Conference suggestions have included the necessity to better formulate planning directions in order to better address health needs on both sides of the border between the United States and Mexico. Two issues seem to have evolved. The first is a policy issue regarding the planning activities needed and how they would lead us to improve existing policies on both sides of the border such that, collectively, we will be better able to improve the lives of people. The second issue, complementary to the policy question, is regarding the nature of programs: are there educational, service or research programs that are needed which will permit immediate response to identified health needs, shared on both sides of the borders?

Although we can identify needs in virtually every country, we must be certain that we express broad ideas that will raise the opportunity to respond to the circumstances of a specific country. For instance, at Kellogg we have a program goal that states we wish to assist projects which will approach providing community wide and coordinated, cost effective health services. Such projects have a different set of characteristics for the United States than for Mexico. The morbidity and mortality data show differences even in populations close to a shared border. What might seem to be a solution for community wide health services in the US might be inappropriate for addressing needs in Mexico and other countries south of the border. We need to know specific characteristics of problems and then to characterize the approach needed. We must focus our interests on the needs of people and categorize how we can meet those by thinking of policy, planning and then the appropriate programs in education, service and research. This conference provides an important opportunity to look at how differences can be addressed in a cooperative fashion.

The Kellogg Foundation's charter permits providing assistance on both sides of the border. This may not be the case for the Carnegie Corporation, but it may participate in such a way that efforts from the northern side of the border will in fact benefit people from both sides, as Kellogg and Carnegie discussed in November, 1983. I am pleased that our two foundations will have opportunities to define and carry out complementary programs that will benefit

people on both sides of our border. It is the position of the Kellogg Foundation that it is important to encourage private interests to come forward and assist in solving problems that affect society, wherever the country. Of all the issues that face mankind, I suspect we all share the bias that health is one issue that should remain non- political.

The opportunity for private assistance and private contributions to meet public needs is great. The efforts between our two foundations, Carnegie Corporation and Kellogg, have led each of us to shape our programs a bit differently. We look forward to assisting other foundations in the United States to examine opportunities to derive additional economic assistance to approach health problems. Whatever the amount of foundation funds, they will not be great enough to solve the problem. All that foundations can hope to do is help people with good ideas to match important needs in order to bring important solutions which can be adapted and brought into the society at a later date, with a larger role from other sources. US foundations are showing interest in programming opportunities in Latin America, which Kellogg will continue to encourage. Furthermore, we will encourage people from Latin American countries to think about opportunities to create private fundations in that part of the world and to help them, if they wish to do so, to follow the form, if you will, of our US foundations in order that Latin American private funds can come to play a more important role in approaching health problems and health needs of their countries. Private funds and private institutions can contribute to public needs in all our countries.

The Kellogg Foundation has enjoyed a little more than forty years of programming opportunities in Latin America. In our most recent annual report there is a summary of programming in Latin America. This is the first Kellogg annual report in which the report of the chief executive officer is bilingual, English and Spanish. We are committed to continue to attempt to respond and assist in meeting the needs of Latin America.

WORKSHOP DISCUSSIONS AND CONFERENCE RECOMMENDATIONS

All participants were divided randomly into three groups and met for 3.5 hours of workshop discussion of the issues delineated by the presentations on maternal and child health and family planning, health promotion and disease prevention and primary care. Each group had a discussion leader and a reporter, all six of whom joined together thereafter for summation of recommendations.

Available statistics about border populations and health indices were carefully compiled by Pan American Health Organization prior to the conference and circulated. All health services were discussed in detail during the conference. Gaps in services are those principally concerned with lack of volume of health care to reach all persons in need of care on each side of the border; many persons are not receiving health care because of lack of accessibility, absence of facilities and inadequate funding including lack of health insurance. Programs in primary care and maternal and child health and family planning are, in general, available whereas programs in health promotion and disease prevention including health education programs are not widely available in spite of the avowed support of participants and their organizations. "Filling the gaps" is principally a question of resources and where they can be applied. There was agreement that each country and its political subdivisions are responsible for health services but that funding is very

limited. Priorities established are for cooperation and coordination at all levels, research in new and innovative ways to provide health services and health education, and establishment of binational records and vital statistics. Summation of workshop discussions and recommendations follows.

COOPERATIVE EFFORTS AND AGREEMENTS

The conference served to identify problems of cooperative arrangements. The Governments of each country operate in some distinctly different ways. The US states can often enter into direct agreements with each other without having to go to Washington D.C. for approval. Power sharing on the border is difficult with such a great mix of providers, governmental and private organizations, and political parties. Integration of services, financing and standardization are all but impossible and yet the creation of an extra governmental entity, a Border Health Authority, while liked by some, was viewed by others as idealistic and impractical at this time.

Yet we must somehow seek cooperation. If we are to improve access and efficiency, we need some standardization. Suggestions for a common immunization form sparked enthusiasm. Mexico, as was indicated, already uses a standard form. It is necessary to assure that the US standardize forms, or at least that the 4 US border states do so, prior to efforts to seek a standard bi-national form. Obviously, a uniform, tracking, vital statistics and data system (preferably computerized) would be of immense benefit, but this will take time to develop. As one respondent from Mexico stated:

> "We have had problems between Tijuana and San Diego, specifically, in the tuberculosis program. We must first agree among ourselves before we try to achieve agreements between countries. We understand problems in Baja California, but we are also aware of the differences of opinion that exist with principals in San Diego County. On occasion we do not even know whom to contact, whether in San Ysidro or San Diego because there are divergent opinions of general methodology or specific treatment. This has caused us some policy and political difficulties, running from one place to another because of those differences of opinion.
>
> The first step must be to come to agreement, in each country (in each local, municipal, county, state, national location) and then coordinate efforts.
>
> If we in Baja California or San Diego are not in accord with a specific program, like tuberculosis, how are we going to agree to cooperate on future programs?"

A "clearing house" effort was called for. Dr. Ortega commented:

> "There is not at this point in time a single location that has information about what is being done on the border. I have run across individuals who are working on similar projects within the same University system who do not know each other. Some of them have completely different ideas as to what the problems

are. Many of them have the same thoughts as to how solving problems might be shared. Some are publishing and only by accident would someone in another University know about this important research. I would hope that one of the roles the Pan American Health Organization can play is that of being a catalyst for sharing information."

In response to this concern, participants disclosed that there is a University of California at Los Angeles (UCLA) on-line data system called Borderline which is accessible to virtually anybody. There would be no need to duplicate such efforts since the computer capability at UCLA is greater than anything one could possibly put together de novo, cost effectively.

The University of California System has also initiated an effort at educational and research coordination through its UC-MEXUS Committee. Texas is contemplating a similar effort. Concern was expressed about access to the results of past studies. A PAHO-Borderline liaison may be indicated, particularly with the concerns elicited about bi-national health planning, technical assistance education, and evaluation. The latter was of particular concern to a number of participants. A number of evaluation efforts are on-going. For example the Center for Disease Control is particularly desirous of being involved in evaluation projects in the field of reproductive health, but expanded efforts by all parties are required.

Cooperative Mechanisms

An ever present concern is the issue of cooperation: nation-to-nation; state-to-state, county-to-municipio, institution-to-institution, project-to-project, individual-to-individual in issues of health along the US-Mexico border. The conference served to point out this concern as among the most sensitive of issues. It was agreed that the conference succeeded in acquainting participants regarding all the above cooperative categories. It was suggested that cooperative structures and projects, deemed very desirable, will take great effort and innovation. While it is relatively easy for individuals to communicate and cooperate, it becomes necessary to conclude informal and then formal instruments of cooperation among groups or individuals.

Other problems discussed and highlighted included the need to develop networks for border health providers with north-to-south and south-to-north referrals and joint medical records, focusing on providers who will see patients from the other country.

Participants indicated that there are numerous informal personal liaisons, north-to-south and east-to-west, but that the north to south liaisons predominate. Individuals and project directors from projects along the border have long maintained relationships which have usually been cooperative. As conference participants indicated, however, when an individual leaves, the liaison between personnel within projects is interrupted.

The process of initiation/continuation/termination of border health liaisons/protocols is beyond the scope of these proceedings, but the sense of need, desire and frustration were strong enough to elicit the suggestion for

the formation of a quasi-independent Border Health Authority. There are a number of existing entities (old and new) that provide an infrastructure for expanded efforts.

Framework for the Future

While there are presently different existing programs, priorities and rationales, a framework for initiating and assessing future program activity must be established in a comprehensive, rather than categorical, approach. Below is presented a framework for policy and planning.

Program Policy and Planning

I. Augmentation:

Specific projects that have proven themselves over time to afford superior outcomes, low administrative cost, effective outreach, utilization, and which have been duplicated in more than one geographic area should be augmented through additional resources in order to accommodate adequately all persons needing the services. Examples:

1. Women, infant and children (WIC) programs
2. Maternal and child health programs
3. Family planning programs
4. Skilled nursing facilities
5. Community health and rural health centers
6. Model primary care programs using sister cities or rural sites.

II. Continuation

Programs that have proven effective in the past and need to be continued but not necessarily augmented. Some have reached a saturation point or are too expensive to duplicate. Examples:

1. Vaccination programs (on the US side at least)
2. Potable water (on the US side at least)
3. Cat scanners and other high technology (limited)

III. Restoration

Programs that have been decreased or eliminated for whatever reason, but showed promise in the recent past. Examples:

1. Health planning, such as performed by Regional Health Planning Agencies in the past. The health planning function must be performed. Some Councils of Government, COGs, are attempting to perform the health planning function. As the recent Texas Task Force on Indigent Health Care vividly demonstrated, such a health planning body is required. Whether the Task Force model is adequate for other than a one-time approach is in question, particularly since there is no authority for sanctions. Planning without sanctions may well be futile.

2. The National Health Service Corps, an excellent program, is scheduled for services reduction and subsequent phaseout.

IV. Replication

A number of programs on the border have proven innovative and effective. Replication should be attempted at other sites that show promise. Examples:

1. The Laredo-Webb County, Texas, Health Department's Community Health Education Project.
2. La Frontera, the Arizona Border, Bilingual-Bicultural Mental Health Project.
3. The Health Officers Association of California, (HOAC), MCH project.
4. The Arizona Community Health Action on Wheels project.

V. Innovation and Investigation Including Research

Health programs must always be open to new ideas. Examples:

1. The development of a common immunization form, possibly first negotiated among the four US border states and/or between sister cities.
2. The development of common treatment protocols i.e. tuberculosis, rabies, etc. to be used in the US and Mexico.
3. The establishment of a Border Health Authority with extra-governmental powers.
4. Examination of the maquiladoras as a focus for maternal and child health activities and examination of environmental and occupational health issues.
5. Accumulation of vital statistics with parameters agreed to by the US and Mexico in advance of a test period.
6. Sharing of personnel between local health departments in the US and Mexico.
7. Exchange students in training programs in the US and Mexico.
8. Formation of a consortium of the 19 University Health Science Centers/medical schools in the four US border states, which should seek funding from Carnegie, the Association of American Medical Colleges, or other sources to initiate a cooperative effort along the border, later to include Mexican Health Science Centers.

SPECIAL EFFORTS

HEALTH EDUCATION

Health Education was unanimously agreed upon as the most cost-effective intervention. The subject of health education is none-the-less fraught with difficulty and controversy. Behavior change and consciousness raising can be viewed as intrusion on personal freedom or an assault on culture.

Of immediate concern to all participants was the issue of translations of health education materials. There was unanimous opinion that to translate English materials is an exercise in folly. Several horror stories served to consolidate enthusiasm for a culturally syntonic effort.

Mention was made of a California effort where materials developed in California were sent to Mexico City for a "reality check." Admirable as that may be, one participant noted: "El districto no es la frontera." There are at least two components to Health Education, consumer and provider education.

CONSUMER EDUCATION

Consumer education was unanimously agreed upon by conference participants as the most efficacious health intervention available. Community Health Education may even take precedence over primary care, if not in dollars/pesos, then possibly in emphasis. Numerous efforts are in place, but the lack of information sharing can lead to duplication in materials. There are problems with methods that have been shown not to work well, for example, translating into Spanish, pamphlets developed originally for American consumers.

In the conference there was general agreement that great efforts must be made to reach families in their homes, not just through radio, TV and pamphlets, but "Hands-On." One suggestion was to use a new type of health provider, a community health worker (see below). The range of topics for health education efforts, while finite, are too numerous to enumerate herein, but bi-national efforts are called for. While not everyone on the border is Spanish speaking, culturally syntonic materials in appropriate Spanish are required. People with limited reading skills could be reached through the use of fotonovelas or through the spoken word such as a 1-800 Tel-Med with computer capability that would not require complex operation. The technology is in place and the information is accessible. The University of Texas Medical Branch is in the process of developing a proposal for this effort.

PROVIDER EDUCATION

Health providers who lack bilingual speech and bi-cultural knowledge are handicapped in service delivery. Participants from both countries were quick to point out that it is imperative that U.S. providers, in particular, be bi-lingual, in order to have interpersonal communications which are effective. Recruitment and training of indigenous Hispanics is of primary importance. Local educational institutions are addressing this but require further resources. All junior college and universities, university health science centers, continuing education programs and efforts like those of Project Hope should seek cooperative efforts and information sharing to enhance the health education of providers.

Border specific continuing education programs are indicated for existing health personnel with encouragement to get into the barrios and into homes with health education personnel interacting and using appropriate health education materials.

SPECIFIC EDUCATION RECOMMENDATIONS

1. Establish in one or more communities a binational primary care residency that is a bilingual and bicultural family practice residency.
2. Use mobile health vans for service delivery on each side of border.
3. Develop binational continuing education programs for health professionals.
4. Institute a career ladder educational approach for nursing and allied health programs.
5. Establish a border health corps, similar in concept to the National Health Service Corps as a border area service requirement of both countries.
6. Provide service and education simultaneously. Utilize hospital residents and senior medical students on the US side and the post graduate medical students doing their year of social responsibility on the Mexican side.

Offer them communication and transportation capabilities (mobile vans) for service delivery on each side of the border (this is also an educational recommendation).

7. Develop non-physician services by using varied health/nursing/public health, etc. students along the border.

There was a substantial amount of enthusiasm for the use of a new level of health educator, the "promotores," or community health workers. Laredo-Webb County Health Department developed and implemented such a program with great success. These community health workers should be indigenous and should, along with other health professionals, receive training in their home locales or sister cities. They should come from both sides of the border. Some may be volunteers, but even paid personnel would be cost-effective. The community health workers would carry public health messages, but would also serve as facilitators and even as community organizers, working in homes, barrios and in the workplace.

Finally, the role of traditional health providers must be recognized and respected by all. Indeed, there should be some efforts to cooperate and interface in every way possible with curanderos, yerbalistas, etc. The issue of midwife education and utilization, a top priority, is a very sensitive issue, particularly on the US side.

MEDIA/MATERIALS

There must be bilingual-bicultural efforts which maximize standardization while maintaining cultural integrity. We have immense media resources. Suggestions:

Models

1. The Maryland Center for Health Education (Blue Cross - Blue Shield)

2. Tel-Med, which is available in many areas and has culturally syntonic tapes available.

3. Radio talk shows, which allow anonymous questions (education),which may be culturally related.

4. Consejo/Plática Networks which provide culturally syntonic mental health programs used by La Frontera, a clinic in Tucson, and others.

5. The AMA has a number of education pieces available. A border liaison exists in the office of Dr. Fernando Treviño.

6. The University of California at Berkeley has developed an interdiciplinary approach to media development by gathering interested parties together. Some challenging pieces are available, but a coordinated effort is indicated. Likely, there is no area more amenable to innovation than the audio-visual arts. NOTE: Safeway stores has been integrally involved in some of these efforts (and has already committed resources).

7. Channel 34 in L.A., which reaches millions of Hispanics in a number of health educational efforts, demonstrates the capability and experience of

TV. Educational and religious institutions own broadcasting capacity that could be utilized for health education. The question is how to involve existing commercial radio/TV/film principals/methods and yet avoid sensationalism/exploitation.

We must explore the possibility of using "marketing". "The reality is that some marketing efforts are immensly successful. "Why not solicit their help!", as a conference participant noted, possibly the Public Media Center in San Francisco, for example.

ENVIRONMENTAL AND OCCUPATIONAL HEALTH

Environmental and occupational health were among the more controversial issues that arose. There are a substantial number of efforts extant, as documented in materials provided by the University of Texas Medical Branch prior to the conference. Pesticides, pollution and workplace hazards must all be addressed with increased vigor and resources.

The presence of maquiladoras in Mexico with workers from Mexico working for American companies that negotiated placement of their factories in Mexico is a highly charged political issue for both sides of the border. Precisely because of controversy of this issue, extra-governmental funding may be required to examine pertinent issues such as environmental pollution, industrial hazards, and the possible opportunity to offer maternal and child health services at the work site.

HEALTH INSURANCE

Participants voiced concern for some method to access health care for those who can afford neither health care nor health care insurance.

It was suggested that mechanisms must be sought to address the issue of health insurance for the medically indigent. This is a problem currently being addressed by the four US states, as documented by materials distributed prior to the conference. It was suggested that possibly one could develop a health insurance program in conjunction with workers, agriculture, industry and government (particularly US counties) and private sources. Mexico's system is different from the US, but with cooperation both countries could address the question of patient transfer and payment across the border.

(There was some question as to whether there is a health personnel shortage or whether there is just a shortage of money. It was generally agreed that the problem involves more than money; rather, it involves at least two other factors - personnel mix and location, but also the desire for cooperation and coordination.)

MATERNAL AND CHILD HEALTH AND FAMILY PLANNING SERVICES

This area was the top priority for action. But there was some concern that categorical funding separated the two efforts and the Mexican participants in particular voiced concern that these are integral to each other and that the most efficacious service delivery system would have to address both at the same time and with a family focus. Maternal and Child Health and Family Planning are the prime focus for programmatic expansion and innovative approaches.

There were some suggestions that these services be offerred at work sites such as the maquiladoras where large numbers of women are congregated.

Major MCH concerns focused on the following:

1. High Risk infants
2. Neo-Natal Care/Prenatal/Early Childhood Care
3. Birth Defects
4. Infections
5. Diarrhea
6. Low Birth Weight
7. A call to promote breast feeding.
8. Coordinated childhood immunization programs targeted at specific diseases.

An important side issue was how to educate women to demand MCH/FP services. The point was made that health delivery systems only respond to demand, not need.

Major family planning recommendations included a call for replication of successful programs such as the Juarez Family Planning "promotores" (Community Health Educators), the sex education programs in Chihuahua, and the San Diego - Tijuana Project.

While it was agreed that FP services should be available and promoted at all primary care sites, and that women seen to accept FP services/materials/education best immediately after delivery, some voiced concern that such traditional exposure comes too late for many, particularly teenagers. (A very sensitive subject, but a phenomenon that seems to be evolving throughout the hemisphere.) Data show that teens have low FP utilization rates. It was noted that FP utilization in Mexico has increased substantially. Cooperative binational efforts were called for. In particular, it was suggested that possibly one could train volunteer couples to offer some FP services, but in view of the sensitivity of the issue, this may not be feasible.

Lastly, it was emphasized that FP efforts must increasingly include the male. California experience indicated that males were quite accepting and that stressing "responsibility" struck a responsive cord.

Research

The need for new and continuing research is a priority. Although a number of specific projects were discussed (see below), other factors impacting on research must be addressed. For example, there was a general sense of frustration at least partially attributable to the lack of a central clearing house: What has been done? What is in progress? What is proposed? What is needed?

As was mentioned above, UCLA has an on-line data base, Borderline, dedicated to US - Mexico border data, which is presently accessible to academic institutions and libraries. With prompting and possibly some modest additional resources, many more agencies and persons could access information about border programs and research. This data base could provide for a central clearing house at minimal cost and importantly, use of Borderline would avoid expensive data base duplication.

Additionally, the Pan American Health Organization field office in El Paso provides substantial help as a clearing house but with meager past resources it is not likely that it can provide a comprehensive database unless there are substantial additional resources.

RESEARCH SPECIFICS

1. Where do people prefer to receive primary health care?
   a. Home
   b. Primary Care Centers
      (Community & Rural Health Centers)
   c. Outpatient Departments (Hospital/Public Health Offices)
2. What are the most effective health interventions across sister- cities? Who provides the health services, what training do health personnel have/need? What additional tools/technical assistance do they need?
3. Surveys of physicians and other health providers are needed regarding what they perceive as priority health education and behavior change promotions.
4. A binational health "Manpower Registry" (including levels of education and language competency) is needed. Such a registry is available in part. A comprehensive health manpower registry would aid in referral, and also is needed for planning. Examples of materials to be included in a registry are:
   a. Decisions by students regarding health professions education
   b. Educational institutions' decisions on augmentation, initiation and/or elimination of health profession education
   c. Providers, agencies and employee searches
   d. Allocation and prioritization decisions of funding sources
5. Risk analyses:
   How do individuals perceive risk? How do individuals respond to risk? What are the cultural factors? What is the decision making process? Can this information be used in educational/compliance efforts and studies? Behavior change efforts for health promotion should be an integral piece of these efforts.
6. Initiate a bi-national study on low birth weight infants with suitable follow-up with expectation that there will be recommendations for future prevention. Coordinate with ongoing studies.
7. Assess the economic status of border crossers seeking health care in order to propose an organized system.
8. Demographic Studies of the rapidly expanding population coming from both and South (Mexico, Central America) and the North (The Snow Birds). As one participant noted: "if we do not recognize the significant demographic shifts we will not be able to address the future."

9. Other research interests elicited were evaluation of:
   a. Health Education: who should do it, where, and how to develop culturally syntonic materials.
   b. Evaluation of patient satisfaction with family planning efforts.

c. Differences in contraceptive usage on both sides of the border (within-group and between-group differences).
d. Breast feeding promotion and analyses of obstacles.
e. Health care delivery studies at the work site.
f. Assessment of effects of occupation on Maternal and Child Health
g. Sex education: cross-cultural factors
h. Hispanic prenatal care
i. Public health as a bi-national effort in the areas of solid waste disposal, vector control and rabies control

FUNDING

Lastly, we recognize the need for funding to address the above and the following were suggested:

1. Funding agencies must be identified in order to increase border health activities.
2. Assemble funding agencies and/or Foundations in one meeting location, possibly initiated by Carnegie or at the US Border Health Association annual meeting.
3. Establish an RFP mechanism regarding border health.
4. Involve the US Mexico Border Health Association binational councils in proposal development, where appropriate.
5. Encourage bi-national proposals even with limited participation and representation of one side of the border or the other.
6. Provide technical assistance in grant development and proposal writing for local initiatives.

CONCLUDING REMARKS

Dr. Elena O. Nightingale

One of the functions of the Carnegie Corporation is a convening function. Having this group assembled has been a tremendous educational experience for those of us at the Carnegie Corporation and I trust has helped to forge some ties among people here that will be continued and that will be helpful in and of themselves. We wished to review health needs along the border, not because we thought we could help fill them all, we had no such grandiose or global expectations, but we did want to have a better idea of the overall problems in order to be able to focus on what we might practically and realistically contribute. This meeting was not for just what Carnegie could do, but to identify what could be done also by others. If possible, Carnegie certainly shall help to attract other funders to the specific ideas that came out of this conference, both for public and private funding.

Another function of the corporation is to call attention to problems, to hold the federal government's feet to the fire, also that of state governments and the private sector, pointing out problems that have attained either insufficient or inappropriate attention. We intend to follow through regarding border health.

There is also a Carnegie responsibility for consciousness raising for the rest of our nation, and I think this conference has been tremendously helpful in enabling us to do that. Carnegie also would like to learn how best to either overcome or go around obstacles in achieving goals outlined at this conference. If, after the conference, any of you have some thoughts, Carnegie would be really delighted to hear from you, not just immediately after the conference but at any time that you feel that you would like to initiate a communication.

The interest of the Carnegie Corporation is beyond health, it is not even primarily a health oriented corporation. Carnegie is an education foundation, but we view health as an entry point to all kinds of other problems. If we are able to get a foot in the door with health problems and health policy development along the border, we might be able to participate more actively in developing educational ties, personal ties and institutional ties in other spheres with our neighboring country, Mexico.

Finally, I want to thank you on behalf of Mr. David Hamburg, President of Carnegie Corporation, whose absence could not be avoided, and on behalf of the people from Carnegie here, Ms. Jill Sheffield, Mr. David Devlin-Foltz and myself.

We have learned a great deal. Carnegie goals have been fulfilled, and we hope to continue the association with you over the years to come.

SOURCE DOCUMENTS
(In Order of Aquisition)

1. Henry, Anne E. Texas-Mexico Border Area Migration for Acute Care Hospital Admission. U.S.-Mexico Border Maternal and Child Health Care Project Working Paper Number 22; LBJ School of Public Affairs: University of Texas, Austin; 1983.

2. Velimirovic, Boris (ed.); Modern Medicine and Medical Anthropology in the United States - Mexico Border Population. Pan American Health Organization Scientific Publication Number 359; 1978.

3. Western Arizona Health Systems Agency. Western Arizona Health Systems Plan 1984 - 1988 and Annual Implementation Plan 1984-1985.

4. Stolp, Chandler. Bibliography on Maternal and Child Health Along the U.S.-Mexico Border. LBJ School of Public Affairs: University of Texas, Austin; 1983.

5. Health Systems Agency of San Diego and Imperial Counties. 1983 Health Systems Plan Amendment; June 30, 1983.

6. The Health of Mexican-Americans in South Texas. Policy Research Project; LBJ School of Public Affairs: University of Texas, Austin; 1979.

7. Duran, Livic, Isauro and Bernard, Russell (eds.); Introduction to Chicano Studies: Second Edition. Macmillan Publishing Co. Inc.: New York: 1982.

8. Anonymous. The Model of Health Care in the National Solidarity Program, Mexico, 1984.

9. Trevino, Fernando. Health Problems in Language Minority Populations: A Statistical Summary of Mexican American Health. American Medical Association, March 11, 1983.

10. Lopez, Steven. Mexican-American Usage of Mental Health Facilities: Underutilization Considered. Chapter 8 from Explorations in Chicano Psychology. Augustine Baron, Jr. (ed.); Praeger: New York; 1981.

11. Chan, Linda and Portnoy, Bernard. Maternal and Child Mortality Status on the U.S. - Mexico Border, Section I and II; LBJ School of Public Affairs, University of Texas, Austin, 1983.

12. San Diego County Border Task Force. 1980 Final Report, May, 1980.

13. The California Raza Health Plan: An Action Guide for the Promotion of Raza Health in California. California Raza Health Alliance, CHISPA, October 1979.

14. United States - Mexico Border Region Health Services. Research Directory--Revised Version; Health Services Research Program, El Paso, Field Office, Pan American Health Office; December 1981.

15. NCHSR Research Proceedings Series. Hispanic Health Services Research Conferences, held September 5-7, 1979, Albuquerque, New Mexico. September, 1980; DHHS Publication No. (PHS) 80-3288.

16. California 1981 Health Manpower Plan Biennial Update. Office of Statewide Health Planning and Development; December 30, 1981.

17. Health Systems Agency of San Diego, California and Imperial Counties. 1984 Health Systems Plan Amendment--Health Facilities; May 31, 1984.

18. Markides, K.S. and Coreil, J. The Health of Southwestern Hispanics: An Epidemiologic Paradox? (Manuscript) UTMB Dept. of Preventive Medicine and Community Health, January 2, 1985.

19. California - 1984 Statistical Update of the Statewide Health Facilities and Services Plan. Office of Statewide Health Planning and Development; November 1984.

20. Mexico and Southern California...toward a new partnership, Report 26 by the Southern California Research Council; Pomona College: Claremont, California; 1981.

21. Gaviria, M., Stern, Gwen and Schensul, S.L. Sociocultural Factors and Perinatal Health in a Mexican-American Community; Journal of the National Medical Assoc., Vol. 74 No. 10; pp. 983-89; 1982.

22. Zepada, Marlene. Selected Maternal-Infant Care Practices of Spanish-Speaking Women. JOGN Nursing Nov/Dec 1982; pp 371-74.

23. Spector, Rachel E. The Utilization of Parteras as a Source of Maternal/Child Health Care along the United States/Mexico Border; U.S./Mexico Border Maternal and Child Health Care Project Working Paper Number 23; LBJ School of Public Affairs: University of Texas, Austin; 1983.

24. Mendez, Margaret C. Prospects for Cooperatives Efforts: A Review of Selected Maternal and Child Health Programs in the United States and Mexico; U.S./Mexico Border Maternal and Child Health Care Project Working Paper Number 24; LBJ School of Public Affairs: University of Texas, Austin; 1983.

25. Bradshaw, B. and Frisbie, W. P. The Usefulness of Census Spanish Surname and Spanish Origin Data with Vital Statistics Data. School of Public Health and Population Research Center: University of Texas; November 29, 1983.

26. Beauchemin, P., et al. Maternal and Child Health in Region III on the United States/Mexico Border (DRAFT); Policy Research Project on Maternal and Child Health on the U.S./Mexico Border; 1983.

27. Cuellar, S., et al. Maternal and Child Health Care in the Mid-Rio Grand Valley; August 23, 1983.

28. Cohen, E., et al. Maternal and Child Health in Region I on the United States/Mexico Border. Lower Rio Grand Valley (DRAFT); Policy Research Project on Maternal and Child Health on U.S./Mexico Border; LBJ School of Public Affairs: University of Texas, Austin, 1983.

29. Ortiz, Alfonso. Comparative Study of Infant Mortality in the Texas/Mexico Border Area of Laredo/Nuevo Laredo; Working Paper Number 29; U.S.-Mexico Border Maternal and Child Health Care Project; LBJ School of Public Affairs: University of Texas, Austin, 1983.

30. Marin, B., et al. Utilization of Traditional and Non-Traditional Sources of Health Care Among Hispanics; Hispanic Journal of Behavioral Sciences, Vol. 5, No. 1; Pp. 65-80; 1983.

31. Guidelines for the Development of Health Systems Plans and Annual Implementation Plans Program Policy Notice No. 79-05; U.S. Department of Health Education and Welfare PHS; February 23, 1979.

32. Powell-Griner, Eve. Characteristics of Births in Two Areas of Texas: 1980 Working Paper Number 21; U.S. Mexico Border Maternal and Child Health Care; LBJSchool of Public Affairs: University of Texas, Austin; 1983.

33. Chan, L. and Portnoy, B. Trends and Variation of Maternal and Child Mortality in the U.S.-Mexico Border Region. Presentation at the 111th Annual Meeting of the American Public Health Association; November 5, 1983.

34. deForest, Mariah E. Mexican Workers North of the Border; Harvard Business Review; Pp. 150-157; May-June 1981.

35. Enforcement in Agriculture Industry and Migrant Labor Camps. Washington State--U.S. Department of Labor, Occupational Safety and Health Administration; April 8, 1980.

36. Plan for Bilingual Services at Highland General Hospital and Analysis of Proposed Alameda County Budget for Fiscal Year 1980-1981. The Legal Aid Society of Alameda County; August 12, 1981.

37. Voluntary Compliance Agreement between the Office for Civil Rights, U.S. Department of Health and Human Services and Seattle Mental Health Institute; May 29, 1981.

38. Toma, Jacqueline. "Evaluating the Effectiveness of Curanderos/ras in Community Health Clinic." Research Proposal (University of Washington) June 7, 1979.

39. South Texas Health Service Area. South Texas Health System Agency; 1979.

40. LaRed/The Net Newsletter of the National Chicano Council on Higher Education, NO. 86; November 1984.

41. LaRed/The Net Newsletter of the National Chicano Council on Higher Education, NO. 85; October 1984.

42. Meeting Health Manpower Needs: A Plan of Action; South Texas State Planning Region(19); Health Advisory Committee of the South Texas Development Council; September 1972 - June 1973.

43. The Health of Texans: A Study of Medical and Dental Education 1974-80. CB Study Paper 23; Advisory Committee and Task Force on Medical and Dental Education; Coordinating Board Texas College and University System; October 18, 1974.

44. Markides, K.S. and Hazuda, H.P. Ethnicity of Infant Mortality in Texas Counties. Social Biology, Vol. 27; Pp. 261-71; Winter 1980.

45. Zola, I.K. Culture and Symptoms - An Analysis of Patients' Presenting Complaints. American Sociological Review; Pp. 615-630, 1966.

46. LaRed/the Net. Newsletter of the National Chicano Council on Higher Education, NO 74; November 1983.

47. 1982-1986 New Mexico State Medical Facilities Plan; Statewide Health Coordinating Council; Department of Health and Environment, April 1, 1982.

48. 1982-1986 New Mexico State Health Plan; Statewide Health Coordinating Council; Department of Health and Environment, March 15, 1984.

49. Chapter III Health System Health Education Services; HSA II - Arizona; Pp. 116-44, 1982.

50. Long Term Care-Licensed Institutional Services for year 1982; HSA II - Arizona;Pp. 1-5; 1982.

51. Review of the Health Situation on the United States - Mexico Border and Recommendations for Bilateral Cooperation; A Joint Effort of the United States, Mexico and the Pan American Health Organization; Washington, D.C.; 1978.

52. General Acute Care Hospital Services; HSA II-Arizona; Pp. 1-6; January 20, 1983.

53. Health Facilities Inventory; HSA II Arizona-Health Systems Plan. 1980.

54. Health Systems Plan for Southeastern Arizona Annual Implementation Plan Health Systems Agency; July 19, 1984.

55. CT Scanning Services (DRAFT); Southeastern Arizona HSA II. 1984.

56. Policy Guidelines for Introduction of Magnetic Resonance Imaging (NMR) Southeastern Arizona (DRAFT); Pp. 1-13, 1984.

57. Chapter II: Health Services Area Description (DRAFT): Southeast Arizona HSA II, 1984.

58. Health Systems Plan for Southeastern Arizona Chapter III: Health Status of Area Residents (DRAFT); Health Systems Agency of Southeastern Arizona, 1984.

59. Health Systems Plan for Southeastern Arizona 1978-83; Volume 1; Health Systems Agency of Southeastern Arizona; March 22, 1979.

60. Health Systems Plan for Southeastern Arizona 1978-83; Volume 2; Health Systems Agency of Southeastern Arizona; March 22, 1979.

61. Health Systems Plan for Southeastern Arizona 1978-83; Volume 4; Health Systems Agency of Southeastern Arizona; March 22, 1979.

62. Annual Implementation Plan for Southeastern Arizona 1978-83; Volume 5; Health Systems Agency of Southeastern Arizona; April 26, 1979.

63. Health Systems Plan for Southeastern Arizona 1978-83; Volume 6; Health Systems Agency of Southeastern Arizona; March 22, 1979.

64. Plan de Sistemas de Salubridad Del Sudeste de Arizona 1978-83; Volume 7, Sumario, 1980, Agencia de Sistemas de Salubridad Del Sudeste de Arizona.

65. Health System Plan for Southeastern Arizona 1978-83; Volume 11; Update 1980; Health Systems Agency of Southeastern Arizona; March 27, 1980.

66. Annual Implementation Plan for Southeastern Arizona 1980; Volume 12; Health Systems Agency of Southeastern Arizona; March 27, 1980.

67. Health Systems Plan for Southeastern Arizona 1978-83; Update 1981; Supplement 1981-86; Volume 14; Health Systems Agency of Southeastern Arizona; July 11, 1981.

68. McCandless, R. and Stolp, C., A Study on the Twelve principal counties and twelve major municipio on the US - Mexico Border. LBJ School of Public Affairs, University of Texas, Austin, 1983.

69. Mines, R. and Kearney, M. The Health of Tulare County Farmworkers: A Report of 1981 Survey and Ethnographic Research for the Tulare County Department of Health; April 15, 1982.

70. Roberts, R.E. and Lee, E.S. Health Practices among Mexican Americans: Further Evidence from the Human Population Laboratory Studies; Preventive Medicine 9; Pp. 675-88; 1980.

71. Bruhn, J.G. and Fuentes, Jr., R.G. Cultural Factors Affecting Utilization of Services by Mexican Americans; Psychiatric Annals reprint; Insight Publishing Co, December 1977.

72. Lopez, Daniel. Health Service in Mexico. Acuna - Journal of Public Health Policy; Pp. 83-95; March 1980.

73. The Federal Government and the Incidence of Pesticide Poisonings: 'Survey of Migrant and Rural Health Clinics' (DRAFT); National Coalition Against the Misuse of Pesticides; December 9, 1980.

74. Title 4. Agriculture Part 1. Texas Department of Agriculture, Chapter 7. Pesticides 4TAC 7.25-7.31; 9 TexReg 5468; October 23, 1984.

75. E.M.S. Health Systems Plan for Southeastern Arizona 1978-83; Volume 8; Health Systems Agency of Southeastern Arizona; June 28, 1979.

76. HSASA Review Criteria 1978-83 Plan Update; Volume 13; Southeastern Arizona, 1980.

77. E.M.S. Health Systems Plan for Southeastern Arizona 1978-83 APPENDIX); Volume 9; Health Systems Agency of Southeastern Arizona, 1980.

78. E.M.S. Annual Implementation Plan for Southeastern Arizona; Health Systems Agency of Southeastern Arizona; June 28, 1979.

79. Pesticide Safety for Texas: A Report of the Texas Department of Agriculture; Department of Agriculture; October 1984.

80. Flores, Juan. Mexican-American Health Professions Opportunity Policy Study. Chicano Health Policy Development Inc.; November 15, 1984.

81. Annual Implementation Plan for Southeastern Arizona 1981-82; Volume 15; Health Systems Agency of Southeastern Arizona, 1980.

82. Health Systems Plan for Southeastern Arizona 1978-83; Volume 3 (APPENDIX); Health Systems Agency of Southeastern Arizona; March 22, 1979.

83. Borderline Information Sheet; UCLA Latin American Center, 1985.

84. Jono, R.T. Census Data of U.S. Border Counties; From 1980 U.S. Census Data; University of Texas Medical Branch, Galveston, 1985.

85. California/Baja California Norte Border Maternity Health Care Project; Discussion Paper-Target Population and Interventions; Health Officers Association of California (HOAC), 1984.

86. Maternal and Child Health on the United States-Mexico Border. US-Mexico Border Health Association; 1983.

87. The Texas Observer: A Journal of Free Voices; Pesticide Battle Lines Drawn in the Dirt; November 9, 1984.

88. Davies, John E. Pesticide Protection: A training manual for health personnel; A guide for recognizing, managing, preventing and verifying poisoning caused by organophosphatics carbonates and other selected pesticides; U.S. EPA; March 1977.

89. Hadden, S.G. and McGarity, T.O. Pesticides and Worker Health in Texas, No. 67; LBJ School of Public Affairs: University of Texas, Austin; 1984.

90. Hadden, S.G. and McGarity, T.O. Regulating Pesticides in Texas #66, LBJ School of Public Affairs, University of Texas, Austin; 1984.

91. Weintraub, S. and Cardenas, G. The Use of Public Services by Undocumented Aliens in Texas, No. 60; LBJ School of Public Affairs: University of Texas, Austin; 1984.

92. Bruhn, J.G. Health Manpower Needs Among Mexican-Americans in Texas. Texas Reports on Biology and Medicine, Vol. 32, NO. 3 & 4; Fall - Winter 1974; Pp. 633-47.

93. Sullivan, D.A. and Stevens, S.A. Snowbirds Seasonal Migrants to the Sunbelt. Research on Aging, Vol. 4, No. 2; Pp. 159-77; June 1982.

94. Hispanic Americans and Health: Source of Information. Library Bibliography Series, No. 14; University of Texas Health Science Center; San Antonio Library; November 1979.

95. Hispanic Americans and Health: Source of Information #2. Library Bibliography Series, No. 8; University of Texas Health Science Center; San Antonio Library; July 1980.

96. Hispanic Americans and Health: Source of Information #5. Library Bibliography Series, No. 14; University of Texas Health Science Center; San Antonio Library; February 1982.

97. Hispanic Americans and Health: Source of Information #4. Library Bibliography Series, No. 16; University of Texas Health Science Center; San Antonio Library; August 1982.

98. Hispanic American and Health: Source of Information #5. Library Bibliography Series, No. 23; University of Texas Health Science Center; San Antonio Library; September 1983.

99. Hispanic Americans and Health: Source of Information #6. Library Bibliography Series, No. 26; University of Texas Health Science Center; San Antonio Library; October 1984.

100. Borderline Subject List--Health Medicine and Public Health. From UCLA Borderline data base Orion system; November 21, 1984.

101. McLellan, David Holt. A Descriptive Analysis of Selected Programs of the "Border Health Initiative" in Texas Region 9 and Coahuila. (MASTERS THESIS); University of Texas School of Public Health: Houston; 1981.

102. Maquiladoras. Translated by Mary Day Kent. SEDEPAC: September 1983.

103. An Assessment of Bilingual/Bicultural Awareness Activities in Health Professions Schools. Urban Systems Research and Engineering, Inc.: Cambridge, Massachusetts; U.S. DHEW PHS No. (HRA) 80-10; November 1977.

104. Hunger in America: The Growing Epidemic, Physicians' Task Force on Hunger in America. Harvard University School of Public Health, Cambridge: 1985.

The following papers were prepared for The Conference entitled "Health Care Needs of the U.S.-Mexico Border: Gaps in Services and How to Fill Them" held in El Paso, Texas, February 27 - March 1, 1985, sponsored by The University of Texas Medical Branch and the Pan American Health Organization, El Paso Field Office and made possible by a grant from the Carnegie Corporation of New York.

105. Gonda, Tomas, M.D., M.P.H. "Health Problems of the U.S. Mexico Border; Do We need a U.S.-Mexico Border Health Authority?"

106. Urbina Fuentes, Manuel, Dr. "Diagnostico de la Situacion Demographic, Planificacion Familiar y Materno-Infantil de la Zona Fronteriza Norte Del Pais.

107. Hart, Larry, Ph.D. Border Health Issues, Health Officers Association of California (HOAC).

108. Ortiz, Augusto, M.D., Andrew Nichols, M.D., M.P.H., Georgiana Boyer, M.D., Elizabeth Laverack, B.A., Diane Hedgecock, M.P.H.,"Community Action on Wheels, Primary Care as a Vehicle for Community Change".

109. Zavaleta, Antonio, M.D., and Robert Malina, M.D. "Physical Fitness, Physical Activity Habits and Body Commission of Mexican American Youths 9 to 18 Years".

110. Summary of Projects Assisted by Grants from W.K. Kellogg Foundation in the General Vicinity of the U.S.-Mexico Border, 1985.

111. Scutchfield, F. Douglas, Ph.D. "The U.S.-Mexico Border: Health Problems and Opportunities."

112. "Indigent Health Care: The Texas-Mexico Relationship." Texas Advisory Commission on Intergovernmental Relations.

ATTENDEES OF THE CONFERENCE ON HEALTH PROBLEMS OF THE
U.S.-MEXICO: GAPS IN SERVICES AND HOW TO FILL THEM

El Paso, Texas February 27 - March 1, 1985

Dr. Dionisio Aceves Sainos
Departmento de Medicina Preventiva
De la Secretaria
De Salubridad y Assistencia
Avenida Presidente Nazaric #490, #10 Piso
Col. Polanco, Delegacion Miguel Hidalgo
C. P. 11560, Mexico, D.F.

Dr. Carlos Adame Zaldivar
Jefe, Servicios Coordinados de Salud Publica
en el Estado de Sonora
Morelia #21, Pte.
Hermosillo, Sonora
Mexico

Dr. George Alleyne
Area Director of Health Programs Development
Pan American Health Organization
525 - 23rd Street N.W.
Washington, D. C. 20037
Telephone: 202 861-3200

Dr. Jorge Jose Anchondo
Senior Research Associate
Texas Advisory Commission on Intergovernmental Relations
P. O. Box 13206, Capitol Station
Austin, Texas 78711
Telephone: 512-475-3728

Dr. Hector Ayala
Associate from Mexico
UNAM
c/o Center for Social Work Research
The University of Texas at Austin
Austin, Texas 78712
Telephone: 512 471-4067

Dr. John Bradley
Medical Director, Region 3
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756
Telephone: 512 584-5660

Dr. Edward N. Brandt, Jr.
Chancellor of the University of Maryland at Baltimore
Former Assistant Secretary for Health
U.S. Department of Health and Human Services
520 West Lombard Street
Baltimore, Maryland 21201
Telephone: 301 528-7002

Conference Attendees

Dr. Paula Anne Braveman
Assistant Clinical Professor of Family and Community Medicine
Division of Family and Community Medicine
University of California at San Francisco
School of Medicine
513 Parnasses Avenue
San Francisco, California 94143
Telephone: 415 666-4061

Dr. Nelba Chavez
Executive Director
La Frontera Center, Inc.
502 West 29th Street
Tucson, AZ 85713-3394
Telephone: 602 884-9920

Dr. Jose Manuel De Las Fuentes
Jefe, Servicios Coordinados de Salud Publica
en el Estado de Coahuila
Cuauhtemoc #548 Sur
Saltillo, Coahuila
Mexico

Dr. Jane Delgado
Special Assistant to the Secretary for Hispanic Affairs
Department of Health and Human Services
200 Independence Avenue, S.W.
Washington, D. C. 20201
Telephone: 202 245-7000

Dr. Diego P. Fernandez de Castro
Director de la Region #1 de la
Direccion General de Servicios Coordinados
de Salud Publica en Estados
Puebla no. 143, 4 Piso
Colonia Roma
06700, Delegacion Cuauhtemoc
Mexico, D.F.

Dr. Amador Flores Arechiga
Jefe, Servicios Coordinados de Salud Publica
en el Estado de Nuevo Leon
Palacio Federal, 1er. Piso
Washington y Zaragoza
Monterrey, Nuevo Leon
Mexico

Mr. David Devlin-Foltz
Carnegie Corporation of New York
437 Madison Avenue
New York, New York 10022
Telephone: 212-371-3200

Conference Attendees

Ms. Maria Elena Aceveda Flood
Project Director
AHEC
Texas Tech. University
Health Sciences Center
4800 Albenita
El Paso, Texas 79905
Telephone: 915 533-3020

Mr. Juan Hernandez Flores
Executive Director
Chicano Health Policy Development, Inc.
2300 W. Commerce
Suite 304
San Antonio, Texas 78207
Telephone: 512 226-9743

Mr. Jose L. Gonzalez, Director
Laredo-Webb County Health Board
P. O. Box 2337
Laredo, Texas 78044-2337
Telephone: 512 723-2051

Dr. Tomas F. Gonda
Medical Director
San Diego County Department of Health Services
J. B. Askew Building
Suite 208
1700 Pacific Highway
San Diego, California 92101
Telephone: 619 236-3583

Dr. Lawrence Hart
Director and Health Officer
Health Care Services
County of Santa Barbara
300 North San Antonio Road
Santa Barbara, California 93110
Telephone: 805 967-2311

Dr. Elsa H. Holtzman
Center for Social Work Research
The University of Texas at Austin
Austin, Texas 78712
Telephone: 512 471-4067

Dr. Pablo Isaza
Representante
Del Pais
Oficina Sanitaria Panamericana
Homero No. 418
Colonia Polanco
Mexico D.F. 11570

Conference Attendees

Mr. John Kelso
Deputy Administrator
Health Resources and Services Administration
Department of Health and Human Services
200 Independence Avenue, S.W.
Washington, D. C. 20201
Telephone: 301 443-2216

Ms. Marilyn Kefauver
Associate Director for Bilateral Programs
Room 18-75, Parklawn Building
U. S. Public Health Service
Rockville, MD 20857
Telephone: 301 443-4010

Dr. Jose Laguna Garcia
Sub-Secretario de Investigacion y Desarrollo
Secretaria de Salubridad y Asistencia
Ave. Reforma y Lieja
Col. Juarez
Del. Cuauhtemoc
06696 Mexico, D.F.

Dr. Michael Lauderdale
School of Social Work
The University of Texas
Austin, Texas 78712
Telephone: 512 471-1937

Dr. William C. Levin
President
The University of Texas Medical Branch
Galveston, Texas 77550
Telephone: 409 761-2351

Dr. Gilberto T. Lusero
Office of the Dean of Medicine
The University of Texas Medical Branch
Galveston, Texas 77550
Telephone: 409 761-2671

Dr. Richard Monteith
Program Analyst
Program Evaluation Branch
Division of Reproductive Health
Center for Health Promotion and Education
Centers for Disease Control
1600 Clifton Road, N.E.
Atlanta, Georgia 30333
Telephone: 404 329-3056

Conference Attendees

Dr. Frank Moore, Associate Dean
University of Texas School of Public Health
P. O. Box 20186
Houston, Texas 77225
Telephone: 713 792-4455

Dr. Pablo Moreno
Coordinador de Evaluacion y Planificacion
de la Facultad de Medicina
Universidad Nacional Autonoma
Ciudad Universitaria
Codigo Postal 045 10
Mexico, D.F.

Ms. Allyn M. Mortimer
Reporter
Carnegie Corporation of New York
201 Comstoch Avenue
Syracuse, New York 13210
Telephone: 315 478 3550

Dr. Fitzhugh Mullan
Secretary for Health and Environment
State of New Mexico
Governor's Cabinet
P. O. Box 968
Santa Fe, New Mexico 87503-0968
Telephone: 505 984-0020

Dr. Leonard M. Napolitano
Dean
University of New Mexico School of Medicine
Albuquerque, New Mexico 87131
Telephone: 505 277-2321

Dr. Andrew W. Nichols
Professor
Department of Family and Community Medicine
The University of Arizona
Health Sciences Center
Tucson, Arizona 85724
Telephone: 602 626-7862

Dr. Lawrence M. Nickey
Health Officer
County of El Paso
5725 Oak Cliff Drive
El Paso, Texas 79912
Telephone: 915 541-4395

Conference Attendees

Dr. Elena O. Nightingale
Special Advisor to the President
Carnegie Corporation of New York
Georgetown University Medical Center
Child Development Center
Bles Building CG 52
3800 Reservoir Road NW
Washington, D. C. 20007
Telephone: 202 625-6970 (Washington)
212-371-3200 (Carnegie-New York)

Dr. Lloyd Novik, Director
Arizona State Department of Health
1740 West Adams Street, Room 407
Phoenix, Arizona 85007
Telephone: 602 255-1024

Dr. Rafael Olachea
Jefe de la Jurisdiccion Sanitaria No. 2
Paseo Cordobeno y Jose Marti
CD. Juarez, Chihuahua
Mexico

Dr. Herbert H. Ortega, Director
El Paso Field Office
Pan American Health Organization
6006 N. Mesa, Suite 700
El Paso, Texas 79912
Telephone: 915 581-6645

Ms. Nancy Padilla
Legislative Assistant
Congressman Ronald Coleman
House of Representatives
416 Cannon House Office Building
Washington, D. C. 20515
Telephone: 202 225-4831

Dr. Marta Palencia
Jefe del Depto de Investigacion de Servicios de Salud
Centro de Investigacion de Servicios de Salud
Secretaria de Salubridad y Asistencia
Mazatlan #117
Col. Rome
06700 Mexico, D.F.

Dr. Gregorio Perales de la Garza
Jefe, Servicios Coordinados de Salud Publica
en el Estado de Tamaulipas
17 Ocampo y Mendez
Ciudad Victoria, Tamaulipas
Mexico

Conference Attendees

Dr. Jesus Pesqueira
Jefe, Servicios Coordinados de Salud Publica
en el Estado de Baja California, Norte
Palacio Federal, #3er. Piso
Centro Civico
Mexicali, Baja California, Norte
Mexico

Dr. Manuel Quijano
Director Unidad de Asuntos Internacionales
Secretaria de Salubridad y Assistencia
Insurgentes Sur #1397, #6 Piso
Col. Insurgentes - Mixcoac
Delegacion Benito Juarez
03920 Mexico, D.F.

Dr. Reynaldo Ramos Varela
Jefe, Servicios Coordinados de Salud Publica
en el Estado de Chihuahua
Avs. Revolucion y Colon
C.P. 31000 Chihuahua, Chihuahua
Mexico

Senor Eduardo Flores Rivas
Mexican Consulate General
910 E. San Antonio
El Paso, Texas 79912
Telephone: 915 532-3585

Mr. George Rodriguez, Jr.
Director of the Governor's Regional
Development Office
Civic Center Plaza #7
El Paso, Texas 79901
Telephone: 915 533-1976

Dr. Manuel H. Ruiz de Chavez
Director General de Apoyo
de Coordinacion Regional
Direccion General de Servicios Coordinados
S.S.A.
Puebla #143 4 Piso
Colonia Roma
06700 Delagacion Cuatehmoc
Mexico, D.F.

Dr. A. Yvonne Russell
Assistant Vice President for Community Affairs
The University of Texas Medical Branch
Galveston, Texas 77550
Telephone: 409 761-4780

Conference Attendees

Dr. F. Douglas Scutchfield, Director
Graduate School of Public Health
College of Human Services
San Diego State University
San Diego, California 92182
Telephone: 619 265-6317

Ms. Jill Sheffield
Program Officer
International Program
Carnegie Corporation of New Yurk
437 Madison Avenue
New York, New York 10022
Telephone: 212 371-3200

Dr. Robert Sparks, President
Chief Programming Officer
W.K. Kellogg Foundation
400 North Avenue
P. O. Box 3425
Battle Creek, Michigan 49016-3425
Telephone: 616 968-1611

Mrs. Margaretha Tilney
Ave. Lopez. Mateos NTE.
Cuidad Juarez
Chihuahua, Mexico

The Honorable William S. Tilney, Consul
American Consulate
Ave. Lopez. Mateos NTE
Cuidad Juarez
Chihuahua, Mexico

Dr. Fernando Trevino
Senior Scientist
American Medical Association
535 N. Dearborn Street
Chicago, Illinois 60610
Telephone: 312 645-5000

Dr. Christopher Urbina
District Health Officer
Dona Ana Public Health Office
530 N. Church Street
Las Cruces, New Mexico 88001
Telephone: 505 526-6617

Conference Attendees

Dr. Manuel Urbina Fuentes
Director, Dept. de Materno-Infantil
Ave. Reforma y Lieja, Col. Juarez
Delagacion Cuauhtemoc
06696 Mexico D.F.

Dr. Antonio Villalva
Director de Servicios Medicos
Departamento de Salud
Centro de Orientacion de la Mujer Obrera
Coyoacan, 3038-2, Zona Pronaf
Ciudad Juarez, Chihuaha, Mexico

Mr. Tom Walker
Governor's Coordinator
Office of the Governor
P. O. Box 12428
Capitol Station
Austin, Texas 78711
Telephone: 512-475-0541

Dr. David Warner
LBJ School, University of Texas
601 Colorado Street
Austin, Texas 78712
Telephone: 512 471-4962